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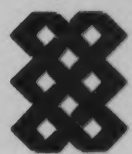
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ABSTRACT

The Pennsylvania School Improvement Program (PSIP) was created to assist local schools and school districts in the development of curriculum improvement strategies. The process involves the use of "linkers," curriculum specialists who work with teams from the local level to ascertain needs, then connect the local teams with the research and development agencies that can provide information and resources to help meet those needs. One early attempt to make PSIP work to improve the reading and language arts program in a northwestern Pennsylvania middle school lasted 10 months and was subsequently abandoned. In this instance, the School Assistance Team (SAT), composed of representatives of several research and development agencies as well as of the Pennsylvania Department of Education, was unable to communicate adequately with the Local Action Team (LAT) of language arts teachers, despite the presence of a primary linker who had been a teacher and board member in the district. The LAT lacked leadership and unity. The roles of the participants were not adequately clarified and false expectations were raised on both sides. Changes in the project due to revisions in PSIP as a whole also disrupted the project's progress. This document concentrates particularly on the effectiveness of the linker concept. (Author/PGD)

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PENNSYLVANIA SCHOOL IMPROVEMENT PROGRAM

LINKAGE CASE STUDY

Intermediate Unit A

This report was prepared as part of the
Research and Development Utilization
Program for:

National Institute of Education
1200 19th Street, NW
Washington, D.C. 20028

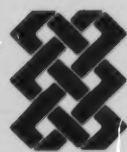
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Bureau of Research and Evaluation
Office of Research, Planning and Data Management
Pennsylvania Department of Education

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PENNSYLVANIA SCHOOL IMPROVEMENT PROGRAM

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Pennsylvania Department of Education**

Linkage Case Study
Pennsylvania School Improvement Program

NIE R & D Utilization Project
Intermediate Unit A

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February 1979

This linkage case study was generated with financial support of the National Institute of Education, through a subcontract between the Pennsylvania Department of Education and the author. However, the content does not necessarily represent the position or policy of either agency, and no official endorsement should be inferred.

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I. Background and Formal Plan

A. The Agencies

This section discusses pre-PSIP interagency relationships, describes the developments that lead to the PSIP, and presents the PSIP intents, linkage roles and responsibilities as specified in the original project descriptions.

1. History and Mission of Agencies

Working with a local school district in PSIP, are representatives of three R & D oriented agencies, the State Department of Education, and the respective intermediate unit. The three R & D oriented agencies, as described in the PSIP information brochure, are:

1. Learning Research and Development Center (LRDC)

The mission of the LRDC, part of the University of Pittsburgh, is to develop, study and evaluate adaptive education environments for schools. LRDC has experience in instructional design, curriculum analysis, policy analysis, teacher education and computer application in education.

2. Research for Better Schools (RBS)

RBS is a private nonprofit educational laboratory established in 1966. Its mission is (1) to research and develop instructional systems and materials to improve educational processes for preschool through adult programs and (2) to assist regional education agencies in preparing and carrying out changes in the educational program.

3. Research and Information Services for Education (RISE)

RISE operates under primary sponsorship of the Montgomery County Intermediate Unit in cooperation with the Pennsylvania Department of Education. RISE has broad experience in disseminating information on curriculum research drawn from local, state and national resources.

The Pennsylvania Department of Education (PDE) is responsible for legally operating educational programs in the Commonwealth. Services of PDE which relate to PSIP are:

1. Development of a set of ten goals for the Quality Education Program.
 2. Development of a set of measures that provide information regarding student performance along dimensions implied by each of the goals.
 3. Organization of part of the State Department's Program staff to provide technical assistance to districts for interpretation of the results of the assessment and implementation of plans.
- P. Stank, 10-76

Intermediate Units (IU's) were established in 1970 for provision of consultative, advising and program services to local school districts. There are 29 such units in Pennsylvania. Seven mandated services are provided through IU's.

1. Curriculum Development and Improvement Services - designed to assist classroom teachers in the areas of instructional programs, staff development and in-service education.
2. Educational Planning Services - relating to Pennsylvania's Long Range Planning process, assisting local district administrators and LRP committees, which involve professional staff and community representatives.
3. Instructional Materials Services - providing classroom teachers and students with a variety of current media materials and instructional tools.
4. Pupil Personnel Services - assisting districts through the use of the data-processing services at the area vocational-technical school in scheduling, grading and attendance.
5. Continuing Professional Services - assisting local district teachers, administrators and board members through seminars, workshops and in-service programs dealing with the current educational problems, regulations and guidelines.

6. State and Federal Agency Liaison Services - providing local districts, administrators and board members with current legislative interpretations and assisting districts in their application procedures for Federal and State exemplary programs.
7. Management Services - providing technical assistance in the area of management and finance to local districts and compiling regional and state surveys.

P. Stank, 10-76

2. History of Relationships

Interagency relationships of the three R & D agencies and PDE were, prior to PSIP: a high degree of awareness of each other, and, in several cases, direct collaboration. Each of the agencies has a well-specified set of activities and services which tend to complement rather than compete with each of the others. Some of the more prominent collaborative efforts have been:

1. LRDC and RBS have been working together over the past 10 years in the development, field testing, and implementation of IPI materials and processes. They have often shared staff members and hired persons from the other agency. There is a feeling of shared responsibility in terms of LRDC conducting basic research and RBS implementing programs in field settings.
2. RBS and RISE have worked closely together since the beginning of RISE. They have developed proposals cooperatively and supported, through provision of services, each other's efforts.
3. RBS and PDE have worked cooperatively for the past several years in statewide planning efforts. RBS has as a member of its board a high level PDE staff member.
4. RISE has worked closely with PDE to provide services and disseminate information on PDE projects, especially those of the PDE Office of Basic Education.

There have been a few cases of conflict of mission and services, mostly between LRDC and RBS. These have tended to be minor and somewhat expected due to the nature and close proximity of the two agencies. However, differences have been worked out mutually and with greater understanding of the respective roles and responsibilities of each other.

All three of the R & D agencies and PDE have worked closely with various intermediate units in the state and had some involvement with the case study site IU prior to the project.

3. Motivations to Participate

Prior to the PSIP commencement, RBS and LRDC had been working with PDE, in response to a paper by Hutchins (NIE) on linking labs and centers for dissemination of R & D products for meeting local school needs, in the area of installation of programs in districts with low scores on the Pa. Educational Quality Assessment (EQA) program of PDE. Based on this initial work, the group responded to an NIE - RFP for utilization of R & D outcomes in providing assistance in improving basic skills in local school settings. This was slightly different than the original intent which was focused on EQA. All of the agencies were to develop parts of the proposal with RBS taking the major responsibility of putting the final proposal together. RBS developed the final technical proposal and RISE developed the final budget proposal. NIE had certain concerns and questions regarding the general scope of work, the division of responsibilities and funding levels for the participating agencies. Modifications were made in these areas and the project was funded for thirty months to begin July 1, 1976.

4. The Proposed Structure

a. Schematic description

Figure 1 presents the overall PSIP structure in terms of primary and secondary linkages. The School Assistance Team (SAT) is made up

representatives from RBS, LRDC, and RISE. Overall management and internal project evaluation are provided through PDE. The SAT works collaboratively with the IU linkers to provide guidance and technical assistance to the LEA group of teachers which make up the Local Action Team (LAT). One of the teachers in the LAT serves as a teacher leader or LAT coordinator.

b. Agency Responsibilities and Exchanges

The PSIP brochure describes, in general, the intents of the program as follows:

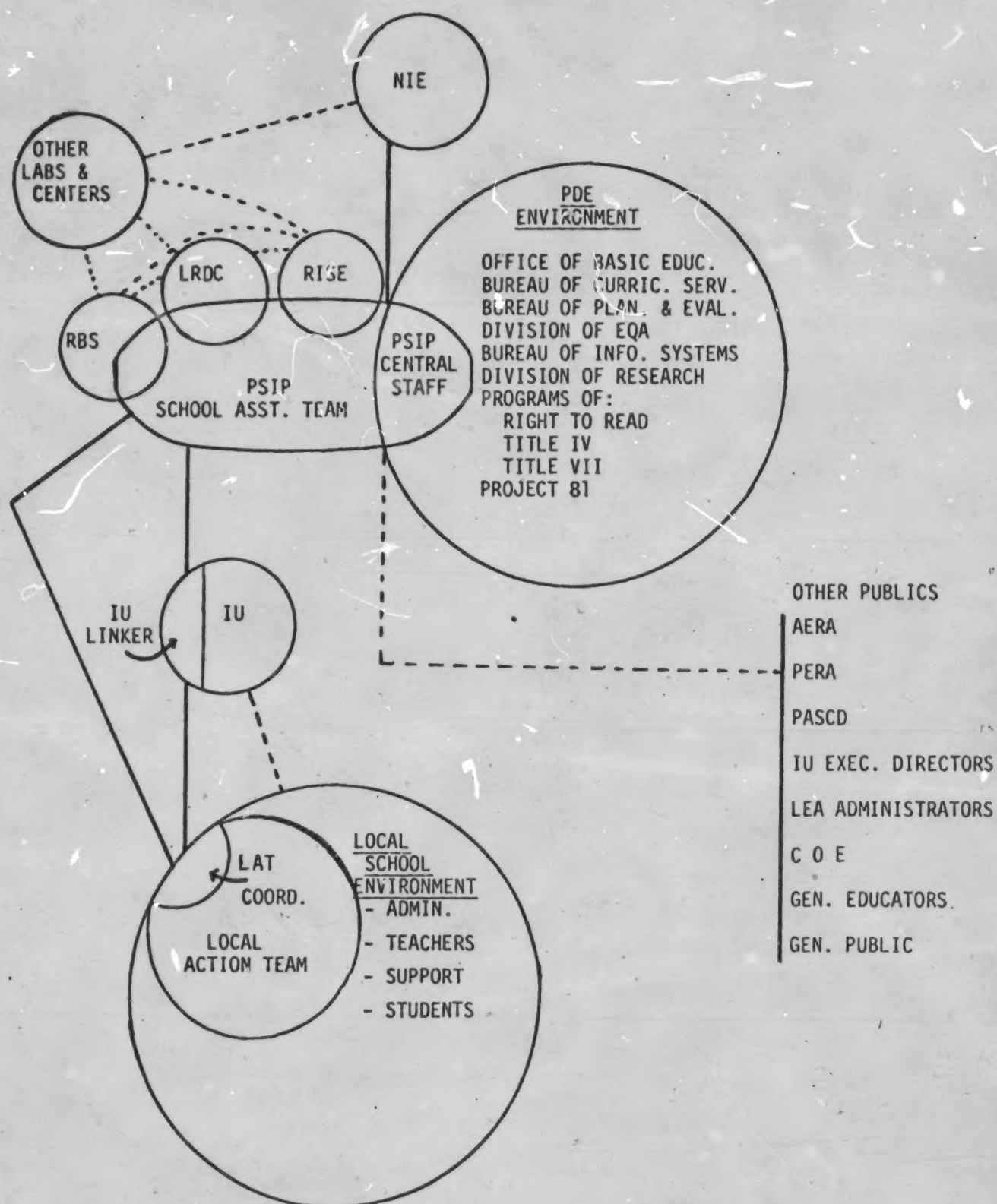
"The Pennsylvania School Improvement Program (PSIP) links the Pennsylvania Department of Education, intermediate units, and research skills instructional programs. The research agencies are: (1) Research for Better Schools, (2) Research and Information Services for Education and (3) the Learning Research and Development Center of the University of Pittsburgh.

PSIP's objectives are, first, to help schools analyze their needs in the basic skills area and second, to help schools improve student performance in basic skills by using the best available instructional programs and techniques produced by research and development activities.

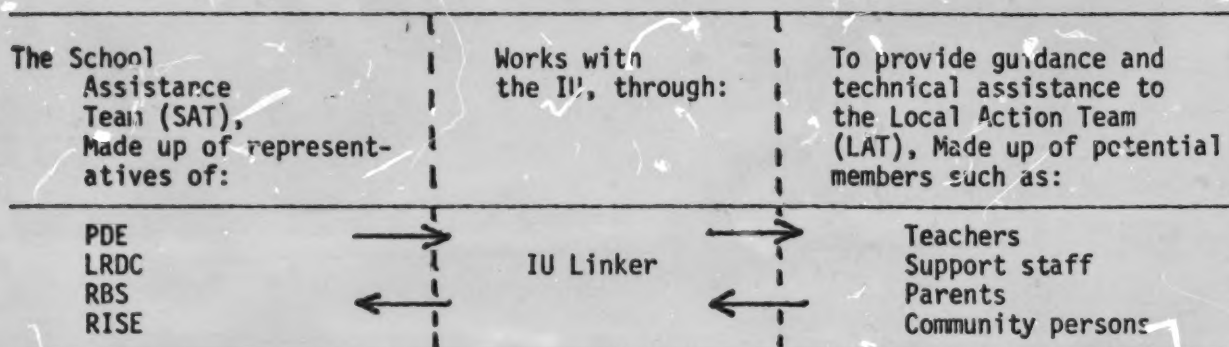
Schools participating in the Pennsylvania School Improvement Program go through four phases: (1) needs definition, (2) knowledge consolidation, (3) selection process and (4) implementation process. These phases in turn are broken down into numerous staff activities.

The benefits to schools participating in PSIP are: an upgrading of staff skills in using needs analysis techniques to improve instruction, documentation of priority areas for improving the basic skills program, technical assistance in reviewing and selecting available options, and technical assistance during the implementation of educational changes.

The Pennsylvania Department of Education is responsible for managing and coordinating PSIP activities. Staff from the Office of Basic Education will participate in program activities."



The overall program organization is as follows:



Relative to the linkage case study site, the SAT was made up of: two persons from PDE (an overall program director and an evaluator), two persons from LRDC (an agency PSIP coordinator and a curriculum specialist), two persons from RBS (an agency PSIP coordinator and a staff member who provided direction and technical assistance for needs assessment activities), and two information specialists from RISE. The intermediate unit provided a full-time linker for the PSIP. In the case study site, the LAT was made up of six language arts teachers, with one of them designated as the LAT coordinator.

The PSIP brochure describes the four phases (needs definition, knowledge consolidation, selection, and implementation) of the process. Following are these descriptions:

Needs Definition

Needs definition is the first phase of school participation. A Local Action Team (LAT) made up of school staff and members of the community work cooperatively in a problem-solving process with a School Assistance Team (SAT) consisting of representatives from the participating agencies.

The needs definition phase has four major activities:

1. **Orientation:** The SAT assists the LAT in identifying a broad area of need in basic skills instruction. Preliminary review includes both EQA data and local test information.

2. **Analysis of Student Needs:** The LAT and SAT work together to determine the nature and the scope of the area of need in basic skills instruction. Student performance goals and teaching objectives are determined.
3. **Analysis of Program Needs:** The LAT and the SAT work together to identify school, home and peer group influences as well as classroom processes as they relate to existing programs and the needs of desired programs.
4. **Program Needs Description:** The LAT develops a statement of the specific area of need. The statement defines the discrepancies in current basic skills instructional programs. Standards are developed for screening the approaches to be considered for implementation.

Knowledge Consolidation

This phase consists of two basic activities. One is a comprehensive literature search on what research and development says about (1) basic skills learning and instructional theory and general learning theory, (2) principles of diffusion and dissemination activities, and (3) school organization and curriculum development processes.

The other activity is the outcome search or the process by which the outcomes of research and development are identified. The list is narrowed, refined, analyzed, described and presented for classroom use.

The three major tasks of the outcome search are: (1) to identify effective educational practices in basic skills instruction, (2) to screen the educational practices for validity and availability and (3) to analyze the educational products and practices using standards developed during the needs definition phase and to provide a bank of appropriate usable alternative practices for basic skills instruction.

Selection

The LAT and SAT review the information gathered during the knowledge consolidation effort using the standards developed through needs definition. The selection process involves: (1) developing final selection criteria related to local school conditions, (2) screening possible educational practices using LAT standards, (3) selecting the practice that best meets the standards and (4) producing a general plan for implementing the educational practice selected.

Implementation

The SAT and the LAT will work together during the following implementation activities.

1. Planning: A realistic action plan detailing activities, time lines and cost estimates is developed. Responsibilities are defined and assigned for both LAT and SAT members.
2. Preparation: Staff, materials and facilities needed for the new instructional processes are obtained. Staff members are trained for the new instructional program.
3. Operation: The new instructional process begins, allowing for modification and ongoing evaluation. Both the LAT and SAT are actively involved in the operational activities.
4. Transition: The trial period of the new instructional product or process is reviewed, and evaluation reports are considered to determine if the new instructional practices have been successful, whether they are more efficient and effective than the previous practice and whether they should be retained. The SAT can help to interpret the information, but the LAT makes the recommendation for the final decision.

Responsibilities for PSIP activities were designated as follows:

1. PDE - Project management, documentation, and evaluation
2. RBS - Needs assessment and R & D outcome implementation
3. LRDC - Program analysis (part of needs assessment) and (with RISE) knowledge consolidation
4. RISE - Knowledge consolidation and selection

These are primary responsibilities. In actual practice, all of the agencies were to be involved in all of the activities at least in an advising and approval basis. This was to be accomplished through several SAT meetings, many of which included other agency personnel and the case study site IU linker.

Functions of the LAT were specified as follows:

1. To define the basic skills problem to be addressed in the local school.
2. To analyze alternative means of attacking the problem.
3. To develop a course of action for dealing with the problem.
4. To involve other members of the school staff, students, and extended community.
5. To assist in the implementation of the action plan.
6. To communicate progress to all interested parties.
7. To assist in evaluation activities.

5. How Structure was Created

Prior to the NIE - RDU Project, informal discussions had been taking place between the PDE commissioner for Basic Education and the directors of RBS and LRDC in the area of improving school practices relating to the Pennsylvania quality goals of education (EQA). A concept paper was prepared by staff at RBS and LRDC which was related to providing assistance at the local level in basic education areas. When the RFP for the RDU Projects came out, these three agencies felt the RDU Project provided the opportunity to get funding to pursue the ideas which had been discussed between the agencies for the previous almost two years.

The original intent, concentrating on EQA, had to be broadened for the purpose of the RDU effort. Since RISE had been active in dissemination efforts in the state and since RBS and RISE had been working together on prior efforts, RISE was brought in to be involved in the proposal stage of the project.

There were some problems in getting the RDU proposal together. Each agency wrote a piece of the proposal and RBS took on the responsibility for putting it together. Problem areas included agency roles, distribution of funds, and specificity of the scope of work. These areas were further specified for NIE and funding approval.

The two intermediate units, referred to as A and B, were involved in the project as a result of previous involvement with the PDE-EQA effort. They had been involved in the development of the RDU proposal.

It was decided that overall management and evaluation of the project would reside with PDE. RBS, RISE, and LRDC would provide technical assistance to the project. These agencies would work through the intermediate unit in providing project services to local teacher groups. The primary linking agent was to be at the intermediate unit level. A major focus of the project was to train and provide technical assistance and resources to the IU linker in such a manner that ultimately the IU linker would be able to replicate the project activities in other IU school districts with minimal involvement of the original agencies. This IU linker would rely on extensive guidelines provided in the PSIP Handbook for conducting program description, needs assessment, product selection, implementation, and evaluation in the original and subsequent local sites.

Staff for the project were assigned by the participating agencies. For the most part these individuals were not involved in the original project design and proposal development. The project director was hired as an outside PDE consultant, providing services on a contracted basis, not as a regular PDE staff member. A staff member of the PDE evaluation division was assigned full-time to serve as project internal evaluator.

B. The Site

One local school district was designated in IU-A as the linkage case study site. This site was chosen on the basis of early involvement and greater early progress through the PSIP process than any of the other sites.

1. School District Philosophy

The following statement represents the philosophy of the school district as described in the PSIP School District Profile:

"The School District primarily exists to, provide experiences to enable each student to assume a responsible role in our democratic society. Each youth has a right to an education, and each student is entitled to quality education.

The District must satisfy the diversity of educational interests, abilities, and needs of students by creating various academic, avocational, vocational, physical, and social programs.

Education involves not only learning but also growing; the District believes in the utilization of programs, approaches, and techniques which will help the student mature. The student needs opportunities to develop leadership, integrity, individuality, and responsibility. Through such an education, each student should recognize his obligation to preserve and perpetuate fundamental democratic concepts.

The teacher has the responsibility to stimulate and to guide the intellectual, physical, vocational, ethical, emotional, social, and aesthetic development of each student by lending his knowledge, skill and personality to the whole educational process. The teacher and the student can function best within an atmosphere which encourages creative thinking and the free interchange of ideas. Such atmosphere is realized when the administrators, teachers, students, Board of Education, and community, working in concert, recognize and fulfill their individual and common roles and responsibilities.

The District has a two-fold responsibility to the community; to exercise leadership which both maintains the best traditions of the community and which prepares youth to play an active role in making this a better community in the future."

2. Socio-economic Background

The case study site is located in northwestern Pennsylvania and encompasses about 39 square miles, most of which is rural farming (both crops and livestock) area. Since the area is located close to a large urban community, it has shifted to become more of a suburban environment than in the past, although it would still be categorized as rural. Population, in terms of employment, is categorized as "predominately blue color."

3. School District General Information (1976-77)

The district enrolls about 2100 students in grades K-12. There are 42 elementary and 69 secondary teachers. There is one each of elementary, middle school, and high school buildings. The decision-making process is described as follows: teacher → chairperson → principal → superintendent. Teachers are said to have (by the superintendent) "considerable academic freedom in the classroom." Each building principal has an advisory committee of parents. The local board, made up of lifelong residents, tends to accept the recommendations of the faculty and administration in curriculum related decision-making. The board tends to be very supportive of the administration. The superintendent feels there are good school - community relations and internal communications. The average experience of the teachers is nine years, with about 10% turnover rate. Residential, light industry, and farming account for the majority of the tax base and 52% of the district's funding comes from local sources. Instructional expense per student averages \$588/year. Student enrollment tends to be increasing slightly. About 25-33% of the high school graduates go on to post-secondary education. Average daily attendance is at the 36th percentile (statewide comparison).

Guidance services are provided for individual student and parent counseling (there seems to be a chronic absenteeism problem). There is a 1: 920 counselor-student ratio in the elementary school. Vocational counseling and training is seen as an area which needs strengthening since about two-thirds of the students do not attend post-secondary programs. The guidance department administers the

district testing program using the Otis Lennon Mental Ability Test in grades 1, 3, 5, and 7, the Stanford Achievement Test in grades 2,4,6, and 8, and the Step - Scat Ability and Achievement Test in grades 9 and 11.

Health services seem to be complete and adequate. Some needs which have been identified are: more frequent hearing testing, more follow-up in dental problems, a K-12 health curriculum, and more thorough physical examinations.

4. Case Study Site School Description

The PSIP effort in this district is with the language arts department of the middle school. The objectives of the middle school parallel the ten goals of quality education specified by PDE. There are 29 professional staff members in the middle school with an average of 10 years experience. Six of the teachers are members of the language arts department; three are designated as English teachers and three as reading teachers.

Enrollment by grade level (1976-77) is: 6th grade = 148, 7th grade = 182, and 8th grade = 184. The school population is virtually 100% White. Average class is 25, mostly heterogeneously grouped with some homogenous grouping within classes.

Data from the March 1974, EQA testing program (8th grade) revealed the following: percentile (based on statewide testing) on verbal = 29, percentile on math = 22.

A long range planning report for the language arts program indicated the following:

"The language Arts program at the middle school has undergone several changes in the past three years in an attempt to meet the needs of our students. We have been successful and feel that with some additional changes, we will have an even better program.

Some of the changes we felt worked were: each teacher teaching each grade level, grouping students according to their needs, and having language arts for a double period.

COMMITTEE RECOMMENDATIONS: One area we thought was weak was having each teacher being responsible for teaching English and reading to the sixth grade for a double period. We thought the double block of time was perfect, but teaching both English and reading was difficult to do well. We will try to correct this by having each teacher teach a double period in his/her area to one class for nine weeks, then trading back again. This way each student will get the equal amount of English and reading hours and each teacher will be able to teach in his or her strongest area. We will be running this same schedule for the seventh and eighth grades also.

Our needs in the language arts program are more materials and two additional staff members. We need materials so every child can have a book to take home. It is very difficult to assign homework when the students can not take home a book for reference.

An additional reading teacher and an additional English teacher would also help to greatly improve our problem by making a smaller teacher/pupil ratio and therefore enabling us to give more individual attention to those students that require it."

Other data were actually collected as an initial part of the PSIP involvement. However, since they relate to the site context they will be presented in this section. These data come from the pulse session and the student and teacher questionnaires. The pulse session is a follow-up to the district profile. Two sets of questions are asked, one set relating to specific site characteristics and the other relating to information regarding the classroom process dimensions of the Cooley-Lohnes model. The SAT met after the pulse visit to prepare a summary report. In general, the pulse visit summary includes the following points relative to the language arts program:

1. There is adequate time provided for language arts instruction.
2. Reading teachers have a common background and professional philosophy of diagnostic prescription teacher.
3. There was little direct evidence of individualization of instruction.
4. Language arts teachers are concerned with the problem of dealing effectively with students who have a wide range of abilities.
5. Teachers are frustrated by a lack of materials and other resources for individualization.
6. Teachers feel there is a lack of supplementary materials for remedial instruction.
7. Classrooms are organized in a traditional manner.
8. There was little evidence that students were more than "inclass readers."
9. Teachers did not seem to expect a high level of student motivation.
10. Little use seems to be made of standardized test scores.
11. Classes seemed well-balanced with no major discipline problems.
12. Enthusiasm on the part of both students and teachers seemed lacking.
13. The general approach used by teachers seemed methodical and students didn't seem to expect any variation.
14. Students entering the middle school tend to be about one grade level below expected in reading achievement.
15. There is no district curriculum guide nor scope and sequence for reading.
16. Instructional events are primarily teacher centered and directed.
17. Teachers are interested in exploring ways of managing the classroom and planning instruction to meet needs of lower and higher ability students.
18. There is a commitment on the part of language arts teachers to improve the program.

19. Teachers seem to be competent, concerned and motivated professionals.

The student survey revealed two "first priority" problem areas of: curriculum motivators and grouping for individualized instruction; three "second priority" problem areas of: student awareness of instructional objectives, matching (difficulty of materials), and other (library usage and liking for class rotation between English and reading). Five areas are cited as no problem areas: time spent in instruction, criterion relevancy, sequencing and pacing, instructional integration, and student perceptions of importance of language arts.

Eleven teachers from other departments completed a nine item questionnaire. They indicated they were not very familiar with the language arts program, but felt reading was important in studying and writing in their own subjects. They felt language arts was emphasized in the school.

All of the data collected in the pulse visits and the questionnaires provide information which describes the context and is useful in the LAT needs assessment activities.

5. The Decision to Participate

a. Site Involvement

Involvement with IU-A had been fairly extensive prior to actual PSIP site involvement. A key staff member from the IU had been involved in the original design and proposal development effort which ultimately resulted in the PSIP. This staff member was not the IU Linker.

PSIP staff including personnel from RBS, LRDC, and RISE developed an orientation - overview presentation which included goals and objectives of PSIP, descriptions of activities, and descriptions of

SAT capabilities. In August (1976), the IU-A Linker arranged to have superintendents and principals from the IU participate in the PSIP orientation session. Reactions on the part of the superintendent and principal from the case study site were generally favorable and they indicated an interest in participating. As one SAT member put it, the "discussion session revealed cautious acceptance to PSIP." There were, however, a few concerns expressed relative to the orientation session. Some SAT members felt there should have been less formal presentation and more time for discussion and questions from administrators. Also, it was felt, by at least one SAT member, that there should be better explanation of PSIP's programs and potential benefits.

The orientation session was then conducted at the case study site with two groups of teachers, the mathematics department and the language arts department. Initial reactions on the part of the teachers were somewhat negative, very skeptical, but some degree of interest was expressed. The IU Linker expressed concern that the orientation session for teachers should indicate more specifically the role of the teachers, expectations of teachers, and roles and responsibilities of the various SAT members. Lack of time for discussion and questions was cited as a problem by several SAT members.

The principal felt that the project was presented on a higher level than the teachers could relate to, it was difficult for them to see what was really in it for them, and very little was said concerning actually helping students. Questions regarding specific topics such as teacher release time, scheduling, and LAT responsibilities were raised. One SAT

member raised several issues or concerns that the SAT should be aware of for future PSIP orientation sessions. Among them were the following: (1) there is a need to have greater understanding of the local school context prior to entry, (2) be careful not to offer services that the SAT is not prepared to deliver on immediately, (3) make sure that incentives are clearly spelled out and appropriate for the local site, and (4) be careful in the use of terminology that gives the local school personnel the impression that you (the SAT) feel they definitely have a problem that needs solution or that they were selected because they are deficient in some respect.

An orientation follow-up meeting was held with the case study site teachers. The language arts department teachers indicated an interest in continuing with the PSIP activities. There was, in general, a lack of total group agreement to participate and commitment varied considerably among the LAT participants.

C. The Linkers

1. Primary Linker, IU-A

Perhaps the most difficult and time-consuming role in the entire PSIP structure is that of the IU linker. In many ways, this individual has to function as part of both the SAT and the LAT. In this bridge position, the IU linker faces the greatest strain between the SAT concerns for generic problem assessment and solution processes and the LAT concerns for immediate and specific difficulties resolution, sympathy, and aid. Consequently the IU linker faces the greatest demand for integrative and coordinative skill. While PSIP is more organizationally complex than many other planned change strategies, the IU linker role within PSIP is perhaps a good example of the change agent role in the organizational development (O.D.) tradition. While there is a good deal of literature on the O.D. approach to planned change, there is little on the characteristics of such a change agent. It is probably true of most O.D. change agent roles, however, that they all place high emphasis on gate keeping, service brokering, or linking skills. In most situations, the O.D. agent is not a change inducer, but a change facilitator, connecting particular clients in specific circumstances with knowledge and technology applicable to their particular problems. In many instances, the O.D. agent actually does knowledge consolidation and needs assessment actively without concentrated outside help. Often, access to knowledge and skills relating to these activities may be personal (or the organization's) past research experience. PSIP is different, in that it has brought basic and applied

research specialists into direct, physical interaction with the O.D. agent. This arrangement should allow the IU linker more time to concentrate upon the practical and specific demands of each site and should make it far less likely that the O.D. agent relies on "pat" or standard problem solution strategies. An effective link between the IU linker and the SAT should allow the LAT rather than the change agent to make the actual problem solution selection. The commitment of each local site to implementation should be much greater in these conditions. The number of resources to which PSIP provides access to the IU linker should also increase the opportunity for change capacity building within each school site, as well as within the IU itself.

The ability of PSIP to function in this manner is dependent upon the ability of the IU linker to call upon SAT resources effectively and to coordinate the SAT when it is on site. Part of the ability of the IU linker to perform as a change agent in PSIP will rest with the ongoing function and mission of each IU. To the extent that the IU itself has a strong concern for local school improvement, it may use PSIP as a good opportunity to develop its own consultative and change agent capacities. If, however, IU's performs basically as a low-interactive service unit to its member schools, participation in PSIP is likely to be seen more as another, and perhaps temporary service. Hence, PSIP, and the IU linker role, would seem to be most effective in instances where the IU itself is seeking to expand its domain from ancillary school services to change agency, or to build its capacity to function in the manner of PSIP, independent of direct and intense contact with the present SAT members.

a. Primary linker background information

The IU-A linker has been an employee of the IU since 1974, serving as a curriculum coordinator. In that position, the linker has been involved in providing assistance to school districts in the IU that have been involved in curriculum design, development, adoption, and evaluation. His position in the IU was funded by a special project, not through continuing IU funds.

Other positions the linker has held include: teaching educable mentally retarded students in elementary school (1965-66); teaching social studies in two high schools (1966-69), including the high school in this case study site; assistant director and director of a regional bureau of human resources (1969-71); and manpower director for a multi-county manpower development corporation (1971-73). In addition, the linker served on the district board of education (1970-73) in the case study site school district.

The linker received a B.S. in Education in 1965, a M.Ed. in social studies education (1968), and a M.Ed. in school administration (1974), and is currently pursuing a doctoral degree in curriculum planning.

In general, the IU-A linker possessed: knowledge of the IU and case study site, personal contacts with IU and site administrators and teachers, background experience in planning, public relations, personnel policies, and negotiations, strong motivation to do a good job, and an ability to be non-threatening to teachers. These strength areas provided a framework which facilitated project start-up in the IU sites. The major pre-project weaknesses or lacks of experience of the IU linker were: lack of training or experiences in being a "middle-man" linker,

lack of technical knowledge of procedures used by the project agencies in needs assessment, program description, and selection phases of the project, and a lack of knowledge in research and data analysis methods.

Initial role expectations of the linker were to: facilitate the entry of local sites to the project, coordinate the flow of information and assistance between the LAT and SAT, and provide direct assistance to the LAT in the absence of the SAT. The linker felt comfortable in this role and had high expectations of the technical assistance to be provided by the SAT agencies.

The opportunity to be involved in an NIE project and be closely associated with people from the project agencies were personal motivations for the linker. It could be said that the linker was "professionally upwardly mobile" and participation in this effort could lead to other professional opportunities outside of the host IU.

b. Linker anticipated tactics and strategies

This section deals with the somewhat idealized perception of the primary linker's role in working with both the LAT and SAT groups. Most of this material is from a paper presented at the 1977 AERA Annual Convention, co-authored by the IU-A linker and the linker's immediate supervisor. In this paper, general attributes or competencies that a linker should possess are presented as follows:

- a. Knowledge in identifying available resources
- b. Knowledge of local needs and capabilities, constraints, and the power base
- c. Strong organizational skills

- d. Ability to work within the framework of the existing host agency
- e. Appropriate communication skills
- f. Knowledge of the change process
- g. Ability to utilize alternatives for collecting data
- h. Knowledge of group process skills
- i. Ability to work with existing site instructional, supervisory, and administrative personnel
- j. Understand, in general, subject matter content areas
- k. Knowledge of the curriculum development process
- l. Knowledge of needs assessment strategies

Another aspect of this paper which sheds light on original expectations was the comment that "the linkage agency should focus its major efforts on the classroom teacher." The IU personnel expected that participation in the project would result in an increased capacity to provide "linking" services to other school districts after the major funded project was completed.

Five linkage strategies were specified by the IU linker and the linker's supervisor. They were:

- a. Focus on a common problem with clearly established criteria for measuring success.
- b. Facilitate direct involvement of SAT specialists working with teachers at the local level.
- c. Coordinate efforts of the SAT as agency personnel work with the local teacher groups.
- d. Facilitate organizational commitment to a cooperative working relationship between agency and local school personnel.
- e. Facilitate agency team efforts based on establishing good interpersonal relations.

In general the IU-A linker expected to use skills and competencies, as specified earlier, to facilitate and coordinate the work of the agency SAT representatives as they worked with the local teachers group.

2. Secondary linkers, PDE (Project Director and Internal Evaluator)

a. Director

The project director for PSIP has been hired as an outside PDE consultant for the duration of the project and has served as the only project director. Previous experiences include: six years as an industrial arts teacher, five years as assistant director and director of the Pa. Research Coordinating Unit for Vocational Education (PDE), two years as assistant director of the PDE Bureau of Educational Research, and six years as vice president and secretary and director of a private corporation in Pa. dealing with the sale of microfilm products and services. Within these experiences have been several activities relating to project design and coordination. The project director holds a B.S. in Industrial Arts Education, a M.Ed. in Industrial Arts Education, and a D.Ed. in Educational Administration. As has been stated before, the project director was not involved in the proposal preparation or the initial project planning activities. The project director was appointed on September 1, 1976.

b. Evaluator

The project has had one internal evaluator who has been with the PDE as an educational research associate since 1968. Experience prior to joining PDE include teaching elementary education for three years. Experiences in PDE as an educational research associate include: project

director, testing and evaluation consultant, and test developer on several federal and state funded projects. The project evaluator holds a B.S. and M.Ed. in Elementary Education and a D.Ed. in Elementary Education/Educational Psychology. The project evaluator was not directly involved in the project proposal development, starting date was October 1, 1976.

3. Secondary linkers, RISE (Two persons)

a. One of the secondary linkers has served as Director of RISE for the past eight years. Experience prior to RISE included two years as a curriculum development specialist for PDE, and five years as a secondary school teacher of English and humanities. Academic preparation include a B.S. in English Education/Mathematics, a M.S. in English, and current candidacy for a doctoral degree in educational administration. This linker was involved both in the original project proposal development and active participation with the case study site LAT.

b. The other RISE linker has been with RISE since 1968 serving as a literature searcher, Director of Information Services, and presently Assistant Director. Prior to involvement with RISE, this linker taught elementary school for six years. Academic preparation includes a B.S. and M.S. in Elementary Education and principalship certification. This linker was not actively involved in the proposal development, but has been very actively involved in work with the case study site LAT.

4. Secondary linkers, RBS (Three persons)

a. One of the RBS linkers was actively involved in the original proposal development. This linker has been with RBS for the past seven years serving as Director of Development for Career Education Programs, Director of RBS Technical Programs, Director of Planning in the Field Services Unit, and presently as Coordinator of Field Services. Prior experiences include positions as Director of the Educational Research Unit for the American Institute for Research and Associate in the Evaluation Services Unit of the Educational Testing Service. Academic preparation includes a B.A. in Psychology, a M.A. and Ph.D. in Measurement and Evaluation. This linker was actively involved with the case study site LAT for the first of the two years of work. Other responsibilities at RBS precluded continuing involvement in the project. This curtailment was attributed to other RBS responsibilities and not to any major dissatisfaction with project processes.

b. Another RBS linker was involved with the case study site early in its involvement, but not from the beginning. Involvement has been very active throughout the work with the LAT. This linker has been on the staff of RBS since 1970. Positions at RBS have included those of Mathematics Curriculum Coordinator, Coordinator for Mathematics Curriculum Development, and Editor/Writer for the IPI Mathematics Program. Prior to work at RBS, this linker served as a college lecturer in mathematics, a school mathematics specialist, and an elementary school mathematics teacher. Academic preparation includes a B.S. in Secondary Mathematics

Education, a M.S. in Mathematics, and a D.Ed. in Mathematics Education.

c. The third RBS linker was primarily involved in the second year of work with the case study site LAT. Involvement was not related to "replacing" the original RBS linker, but did occur at about the same time. This linker was involved actively for the second year of the work with the LAT. This linker has been on the RBS staff since 1970. Positions held at RBS include Development Specialist in Career Education Programs, Assistant Curriculum Coordinator for Mathematics, and Curriculum Writer/Editor. Academic preparation includes a B.S. in Early Childhood Education and a M.A. in General Curriculum Development. This linker was not involved in the original proposal development.

5. Secondary linkers, LRDC (Two persons)

a. The secondary linker from LRDC with the most involvement in the case study site has been a Research Associate at LRDC since 1974. Experiences at LRDC include Director of School Programs in addition to Co-Director of the LRDC efforts in PSIP. This linker was involved in the original proposal development. Prior to work at LRDC, this linker had experience as: a science teacher (11 years), a guidance director (6 years), a principal (5 years), a director of curriculum and research for a school district (6 years), an assistant superintendent (4 years), and a superintendent (4 years). Academic preparation included: B.S. in Secondary Education, M.Ed. in Secondary Education, and a D.Ed. in Curriculum and Administration.

b. The other secondary linker from LRDC has been with LRDC since 1968 and has served as a Research Assistant, Senior Research Assistant, and is currently a Research Associate. In addition, this linker is on the faculty of the Curriculum and Supervision Department at the University of Pittsburgh. Prior to joining LRDC, this linker was a high school history teacher and worked on a Ford Foundation Project in Central Pennsylvania. Academic preparation includes an A.B., an M.A. in Political Service and a Ph.D. in Secondary Education. This linker was involved in the original proposal development effort. Most of this linker's involvement with the case study site was somewhat indirect, except in the program analysis phase. Most of this linker's time was spent developing materials for the PSIP Handbook which was to be used in all of the project sites.

6. Summary of the Primary and Secondary Linker Involvement in the Proposal Development and IU-A Case Study Site

a. Proposal Development

The primary linker at IU-A was not involved in the proposal development although the linker's supervisor was involved. The linker's supervisor had little involvement in the actual operation of the project.

At the PDE level, neither secondary linker was involved in the proposal development. Both were brought with the project after funding from NIE. The major PDE staff member involved in the proposal development resigned shortly after the project was approved. Another person from the PDE - Educational Quality Assessment Division was involved in the proposal development, but when the focus shifted away from EQA, involvement became minimal in terms of actual project activities.

One of the two RISE linkers, one of the three RBS linkers, and both of the LRDC linkers were involved in the original proposal development. Another LRDC staff member was involved in the proposal development but had very little actual involvement in the project because of other LRDC responsibilities.

Thus, of the ten major project participants at the IU-A case study site, only four had been actively involved in the original proposal development effort. This did not include the primary linker or the project director. In addition, the major PDE project advocate, The Deputy Commissioner for Basic Education, resigned at about the same time as the project started. The new Deputy Commissioner came in with little knowledge of the project interests or activities.

b. Involvement with IU-A Case Study Site

Figure 2 describes the general amount of involvement of the primary and secondary linkers by phase of the processes of the project. This involvement includes actual work with the LAT and preparation of materials for use with this and other project sites.

Linker	Orientation & Entry	Site Description	Needs Assessment	Program Analysis	Problem Identification	Knowledge Consolidation	Selection
Primary Linker IU-A	H	H	H	H	H	S	S
Project Director	N	S	S	S	S	S	S
Project Evaluator	N	H	H	H	H	S	S
RISE Linker (a)	H	S	S	S	M	H	H
RISE Linker (b)	H	S	S	M	M	H	H
RBS Linker (a)	M	M	M	S	N	N	N
RBS Linker (b)	N	S	H	H	H	M	H
RBS Linker (c)	N	N	N	N	S	S	S
LRDC Linker (a)	H	H	H	H	H	S	M
LRDC Linker (b)	S	S	M	M	M	S	M

Degree of Involvement

N - None

S - Slight

M - Moderate

H - High

Figure 2

II. Key Concepts Used in this Linkage Case Study

This linkage case study describes the linking arrangements developed to work with local school sites in Pennsylvania in the utilization of R & D products in the solution of local problems. It looks specifically at project activities of the linking agencies and primary linker working with a middle school in northwestern Pennsylvania, where a complete reading/language arts department participated in project activities for about 14 months. During that time several agency linkers and the IU linker spent a great deal of time and the project invested a great deal of money working with the participating teachers. This case study describes the activities of the project staff, the IU linker, and the local site participants and makes some inferences relative to the linkage and linker actions affected by and affecting work with the local participants.

The reader of this case study should be aware of the development of certain key concepts or inferences that will be made later in the case study. Activities on site did not lead to the implementation of an R & D product. Key concepts relating to this case study can be categorized into site level and linker level. There are no singular, easily-identifiable reasons for lack of product implementation success. The reader must consider the total situation and interactions of several factors to study the process and outcomes of the PSIP project in this site.

This site was one of the first project sites. While all of the agency personnel were experienced in working with local sites, none had been involved in such a concentrated team-effort over

such a long period of time. Early efforts to get the project organized and project process materials developed took a great deal of time. Many of the project activities and materials were used for the first time with this local group. Thus, there were points when the SAT may have seemed somewhat disorganized. The fact that this was one of the first groups precluded the SAT personnel from being aware of some of the contingencies that could arise and the consequences of various project strategies.

This writer thinks that had the SAT personnel been able to predict what might happen in this site, they would have probably terminated involvement in the early phases. One of the key aspects of the PSIP process was the development of a total team approach to problem identification, search and selection of R & D products, and implementation and evaluation of the selected product. The team feeling never developed with this site. Neither the SAT nor LAT viewed the collaborative work of both groups as a single team effort. Each group maintained its autonomy and very often, especially the LAT, used tactics to protect that autonomy, even to the point of disrupting project activities. Not only did the LAT not have a feeling of LAT-SAT team status, but they didn't consider themselves a team. While they would admit to being in the same department, their actions in the project clearly indicated that they had little group cohesion. About the only time they acted as a group was when they felt a need to put up a common front to resist project activities that they didn't see as important or interesting. School administrative support for the project was mostly lipservice and

approval through lack of disruption. The LAT was never fully committed to the total project procedures. They expected the group of "experts" to provide quick, clear-cut problem identification and product installation. On several occasions, the LAT would take a vote to determine whether or not they would continue in the project. For a long time, neither group (the LAT nor SAT) was willing to admit that little progress was being made so activities should cease. Only after the LAT became frustrated that so much time had been spent and they didn't feel much progress had been made, did they decide to drop out.

Another factor in this site was the somewhat unnatural climate of this project at the site level. Very often there were as many linkers from the agencies as LAT members in the meetings. The massive technical support was somewhat overpowering to the local group and increased their expectations for finding a product to solve any of their problems. Combined with this situation was a sort of "fish-bowl" atmosphere. On several occasions, other persons observed the LAT-SAT meetings. This and other case study writers and consultants from NIE observed meetings. Local teachers became aware that they were participating in a large-scale federally-funded project with a heavy research component.

The IU linker selected for this case study site intermediate unit was a previous IU staff member serving as a curriculum coordinator, supported by external project funds. He was selected by the IU administration to serve as the IU linker. Because he was known by the administration and teachers in the local site and had

served in a position as a curriculum advisor, the project staff felt the linker would be a "natural" and would pick-up on specific functions as the project progressed. Thus, there were no linker training activities at the beginning of the project nor very clearly stated responsibilities of the linker in relation to the work of the SAT agency personnel. While the personal contacts of the IU linker seemed to have helped in getting the site organized and oriented, his effectiveness as a process facilitator seemed to be hampered by these pre-project relationships. The IU linker was viewed as being more a member of the SAT and involved in status-enhancement activities. Certain of the SAT linkers encouraged and reinforced this position. Another factor in the linker effectiveness issue was the pre-project relationship of the linker with the site. He had been a member of the site school board and was viewed as a friend of the administration. This created certain expectations of functions and practices of the IU linker which had an effect on his acceptance by and ability to work with the LAT. By the end of the project, the IU linker was frustrated and was having a difficult time working with the LAT. These and other important factors are discussed in this linkage case study.

Section III presents a description of happenings in the project and linkage analysis of the project phases (entry, problem identification, search and selection, and post active participation). Overall emphasis of linkage arrangements and procedures is provided in Section IV. Section V presents implications and recommendations in the

areas of policy, management, and research relative to inter-agency linkage structures as support mechanisms for local educational change.

III. Narrative

A. Entry/Initiation

1. Happenings

This discussion concentrates on the entry of the case study site into the project. It should be recognized that prior to site entry, a great deal of effort had taken place to get the project staffed, to get orientation materials prepared, and make contacts with potential sites. Because an IU-A staff member had participated in the original proposal development, it was natural that IU-A would be an active participant in the project effort. This IU-A staff member, with the assistance of the IU linker, contacted potential site superintendents and principals to invite them to a group presentation on the project purposes and methods.

Personnel from RBS, RISE, and LRDC developed a PSIP orientation program which was presented to these potential site superintendents and principals in August 1976. The project director had not been hired at that time so there was no involvement in this activity. PSIP staff were somewhat disappointed in the presentation. As the LRDC linker stated, "The overviews were not as effective as I had hoped. Time limitations did not permit adequate presentation." One of the RISE linkers felt that the presentation "was slightly dysfunctional and that intensive follow-up was needed." Contacts were made with the superintendents and principals a few days after the orientation session and all six sites agreed to participate in the project. The site which is the subject of this case study was one of these six sites. Site staff were said to be "interested but skeptical."

On September 3, 1976, the orientation session was presented to the teachers of the case study site. Two groups of teachers, mathematics and language arts, participated in this session. One of the RISE linkers had the impression that there was "cautious acceptance of PSIP." The IU-A linker felt that the PSIP personnel "did not provide sufficient explanation of the project goals and objectives," and "the sessions" should have more clearly explained specific teacher roles in the project, what is expected of them?" The RBS linker expressed several critical concerns regarding the orientation sessions presented to administrators and teachers:

- "1. We need to more carefully understand the objectives of the schools that are participating in the program prior to meeting them. Plan for the schools' objective as well as our own.
2. Do not offer services that you are not prepared to deliver immediately.
3. Be careful to provide incentives for participating schools.
4. The use of certain terminology or concepts is offensive to schools (e.g. schools have a "problem" that needs to be solved or the implication that schools were selected because of the poor reading/math (EQA) performance of their students.)"

Teachers in the case study site met independently to discuss participation. The language arts group of six teachers decided to initiate participation.

A district profile was compiled by the IU linker based on input from the school administration and guidance counselor in addition to existing records. Results of the district profile were presented in an earlier section of this report. This profile was presented to the SAT for general information and as initial input for the development of a site "pulse visit." The pulse visit occurs about a month after the site orientation visit. Its purposes are to increase communication between LAT and SAT persons, give the SAT a general impression of the general climate, and provide information on possible areas of conflict in the PSIP activities. Pulse visit questions deal with two areas, specific site characteristics and assessment of classroom processes based on the Cooley - Lohnes model. The results for the case study site are discussed in an earlier section of this report. The pulse visit took place on October 8, 1976. SAT members conducting the "pulse visit" were the IU linker, the project evaluator, a linker from LRDC, and a linker from RBS. SAT members interviewed the language arts teachers and observed both reading and mathematics classes. One of the SAT members felt the pulse visit resulted in more understanding of the local situation on the part of the SAT, but not much more understanding of the PSIP by the LAT.

During the four weeks between the pulse visit and the first needs assessment session, the IU linker met with the school principal and guidance counselor to discuss teacher concerns and PSIP procedures. The principal indicated the total reading/language arts department would be the LAT and he would select the LAT coordinator.

In general, the status at the IU-A site at the end of the entry/initiation phase was characterized by weak commitment in the part of the LAT, a lack of understanding of respective roles of the SAT and LAT, a lack of understanding on the part of the LAT of future project activities, a question about district administration commitment for facilitation of the project process and provision of resources in implementing a selected R & D product, and lack of LAT group cohesiveness or leadership. The SAT was beginning to become somewhat skeptical of the level of success which could be achieved in this site.

2. Linkage Analysis

a. Linker associations with the site

As was pointed out before, the IU-A linker had been involved with this site as a teacher and school board member prior to joining the IU staff. Contact with the site superintendent and building principal had been strong and positive. This was a primary reason for district administrator interest in the project. It was the "foot in the door." This relationship resulted in some pressure being placed on the teachers for participation. The teachers generally knew the linker from past experiences, although the linker's role in the project was very different from the prior role as teacher and board member and a much more concentrated role than the linker's function as a member of the IU staff. Teacher expectations of the role of the linker were influenced by previous experiences and teacher feelings about the linker. Thus initial efforts of the linker required not only a great deal of explanation of the project role, which would have been required whether or not the

teachers had known the linker in a prior role, but also explanation of how this role differed from prior roles in the district and the IU. This seemed to have been achieved relatively well.

There had been no involvement of the SAT members in the site prior to the project. A natural level of suspicion existed on the part of the LAT of the "outside experts" from the "ivory tower" research agencies. The initial presentations did not overcome this suspicion. This factor, coupled with the fact that the SAT agencies and members were still in the process of defining their own roles and project activities, resulted in an inability of the SAT to adequately explain purposes, roles, and processes of the project, to adequately reduce suspicion of the LAT, and to recognize the implications of working with a group marginally committed to such a large scale change process.

b. Linker - host agency relations

Since it was the start of the project, the primary linker and the agency linkers were in a state of transition from pre-project to project activities and responsibilities. The primary linker's relationship with the IU host agency did not seem to be affected by participation in the project. The linker's supervisor had been involved in the original project design and was thus very supportive of the role modification of the primary linker. Since one of the functions of the IU was to provide services similar to the project services, although not on the same scale, there was little, if any, resistance to the project on the part of the IU personnel.

The two linkers from RISE were the director and assistant director of the agency and since the RISE mission was somewhat narrow and very much related to project purposes there was no effect on linker-host relations. The linkers were essentially the hosts.

In the multiple-mission agencies (PDE, LRDC, and RBS) there was a feeling of importance placed on involvement in the project. Thus, there was high level support for the project. All of the secondary linkers, however, were faced with the need to explain to colleagues in their agencies the nature of the project and reasons for involvement. In almost all cases, modification of position responsibilities took place (changes from other projects and agency duties). This occurred with minimal agency disruption. The only significant linker-host relationship which required major effort was in the appointment of a project director who would be housed with PDE, the major funding recipient. This appointment occurred somewhat late in the start of the project. Starting the project without a project director had more of an influence on inter-agency relations than linker-host relations.

c. Inter-agency relations

As was pointed out earlier in this case study, all of the SAT agencies had a history of involvement ranging from not high involvement such as between RISE and LRDC and between PDE and LRDC to high supportive efforts such as between LRDC and RBS, between RBS and RISE, between RBS and PDE, and between RISE and PDE. Although there have been some natural "turf" problems, primarily between the two

multiple-mission R & D agencies (RBS and LRDC), these have not been severe and have not resulted in any negative feelings that influenced the development and organization of this project effort.

However, it could be expected that there might be some problems of responsibility definition and material production in the start-up of the project. There were several such problems which need some presentation. Initially there was some concern that the orientation presentation prepared by LRDC and RBS did not provide enough specific information to potential participants relative to roles of agencies and expectations of teachers and administrators. This created concern on the part of potential participants. Perhaps the most serious problem occurred in the planning phases of development of the needs assessment and program description materials. While plans for the needs assessment procedures had been made in July 1976, RBS felt that LRDC was not providing enough assistance in this effort and was not delivering materials in a timely fashion. This problem was compounded by not having a project director on board early enough to provide the necessary coordination between the two agencies to get the task accomplished. The lack of specific plans for needs assessment created a problem in the orientation of the potential site teachers since the agency personnel weren't able to specifically tell the teachers what would be involved in the needs assessment phase.

Another inter-agency problem area occurred between RISE and LRDC in the planning of the knowledge consolidation phase of the project. A meeting was held to further specify the roles of each agency. RISE felt that both LRDC and RBS were not very "R & D product oriented" at the beginning of the project. In addition, RISE was having some problem getting information from R & D product developers. RISE felt a need for both linkages between the project and NIE, and R & D labs/R & D centers to get needed information.

The late start of a project director created some disfunction of inter-agency cooperation and resulted in concern on the part of the agency personnel regarding the use of project resources. Problems were handled through several meetings and telephone conversations, internal to the project at the agency level and were not shared with potential or actual project administrator or teacher participants.

On another level, there was a problem in getting project evaluation instruments for use with the early entering project sites.

This created concern on the part of the PDE assigned project evaluator.

B. Problem Identification (Needs Assessment and Program Analysis)

1. Happenings

RBS members had developed six modules for the needs assessment and program analysis activities. They were as follows:

- I. Awareness
- II. Desired Student Outcomes
- III. Current Student Performance
- IV. Discrepancy Analysis
- V. Program Analysis
- VI. Program Analysis Report

Completion of these activities was to result in a "School Needs Definition Summary."

In the case study site, the needs assessment/program analysis activities took place from November 1976 to June 1977. The introduction to needs assessment (awareness) took place on November 11, 1976. The meeting participants included three SAT members, four of the six LAT teachers, the site principal, the site guidance counselor, and the IU linker. The RBS linker had the major presentation responsibility. During the initial part of the meeting there seemed to be a general reluctance to commence a formalized needs assessment process. Teachers didn't see a need for it and were still uncertain that they wanted to participate. They generally agreed, with reservations, to continuing with the PSIP activities, after meeting with the principal at lunch. Some concern was expressed by SAT members that the LAT lack of commitment might prevent adequate progress. The original afternoon agenda was revised to allow for SAT-LAT interaction to help clear up misunderstanding. Discussion in the afternoon was based on the results of the observations and data collection activities of the pulse visit. The LAT gave the impression that they were in a hurry to get through the PSIP process so they could implement a selected product. The SAT cautioned the LAT that there could be problems if the PSIP process was shortened or parts eliminated.

Based on a request from the SAT, the LAT prepared a "problem statement," according to the categories (provided by the SAT) of: Who is affected?, Who is causing it?, What kind of problem is it?, and What is the goal for improvement? This problem statement cited as the major LAT concern, the "development/reinforcement of basic skills in reading." The general problem statement was in the form of four stated needs:

"To establish a better working relationship between students, teachers, and parents. The problem lies in the motivation of students.

For the student to want to improve his academic life.

For teachers to be able to get hands on materials to help the student feel better about school and success while here.

Less concern about test scores and more concern about developing students so that they can become more productive members of our society."

Other important comments were made on this problem statement summary. One which came up again in later meetings of the SAT and LAT was: "It would be nice to come up with a series of diagnostic indicators that would enable us to individually determine student levels of success/lack of success so that we could begin with each student where he/she is at and progress at a rate compatible with the needs of that student. Too much too fast is too frustrating and may resolve nothing."

On the basis of the LAT prepared problem statement, three major

areas of concern were identified. They were in the areas of preparing students in basic reading skills, motivation of students, and individual student diagnosis and management of learning activities. This problem statement was to be discussed in the second needs assessment session.

Since this was early in the project, plans for needs assessment were still in the "field test" stage and thus the SAT had difficulty in informing the LAT as to the next specific project activities. This session provided the first example of an issue that would emerge time and again in the future SAT-LAT interaction sessions. The position of the LAT was, in general, "You (the SAT) are the experts, tell us what the problems are and how they can be solved by participation in the project," while the position of the SAT (although not all the SAT members totally agreed with it) was, in general, "You (the LAT) have to decide what your problems are, what your needs are, and how we can provide information and procedural assistance in your selection and implementation of an R & D product relating to those needs."

The LRDC linker felt the pulse visit discussion was "somewhat disappointing because involved staff (school administrators) were not available for reactions" and thus could not provide information on district policies or resources that could be used in the PSIP process. In addition, the LRDC linker felt that the session "probably left the LAT with a poor impression of the project's purpose." The RBS linker's impression of the pulse visit presentation was

summed up by the statement, "Although we were aware of the teachers expressed desire for more specific information, the lack of formal plans for the entire needs analysis and the SAT's desire to use all their time to collect data, prevented the SAT from answering the LAT concerns."

Based on this experience in the case study site, the SAT revised and provided more focused direction in the needs assessment activities at other sites. It was felt that the needs assessment activities should have taken on more of a workshop atmosphere with greater preparation for teacher involvement. After this meeting, the linker met several times with the building principal to get understanding and support for the needs assessment. Support from the principal was instrumental in keeping the program going.

Another factor which emerged at this meeting, and would be evident in many of the SAT-LAT meetings, was that the LAT was not a very cohesive group. Four of the six teachers, including the language arts department head, seemed to be somewhat interested in the project, although they were not highly committed. One of the other two teachers seemed to be able to "take it or leave it" and the other was very negative about project participation. The department head did not demonstrate any strong leadership in the meetings. While my impression is that the department head was considered somewhat of a leader by the group, this individual clearly sought out participation but not leadership in the LAT.

Shortly after the first needs assessment session, the principal

chose as the LAT coordinator a teacher who had demonstrated skepticism and somewhat negative attitudes toward PSIP in the initial sessions.

On November 19, the IU linker, the project evaluator, and the LAT coordinator met for a half day to begin the work on the desired student performance charts in reading/language arts. Desired performance charts were partially completed and plans made for the next LAT-SAT meeting.

The next LAT-SAT meeting occurred on November 26. In addition to the six LAT members, the IU linker and three SAT members participated in this meeting. The principal, guidance counselor, and a community representative also attended. The major activities which took place in this meeting were related to discussion of desired student performance data. The LAT had a more positive attitude toward participation after this meeting.

The third needs assessment meeting, to deal with current student performance data, was held on December 2, 1976. In this meeting the LAT worked without SAT assistance to complete comprehensive desired and current student performance charts.

On January 13, 1977 the SAT (three members) and the linker met with five of the LAT teachers to conduct the discrepancy analysis of the desired and current student performance information. The SAT felt both the December and January meetings demonstrated positive involvement in the process. LAT members indicated that the sessions were productive and useful.

Weather problems caused schools to close for a substantial portion

of time during January and February. Although this slowed down progress, it was generally felt that the delays did not reduce the involvement or commitment of the LAT.

In March the LAT met to continue the needs assessment phase and move into the program analysis phase. Program analysis was based on the Cooley-Lohnes model classroom influence variables. As a part of program analysis, students were asked to complete a questionnaire on their perceptions of the classroom variables and faculty from other departments were asked to complete a questionnaire on their perceptions of the language arts department. These data were used in conjunction with the needs assessment data to focus on possible R & D outcomes that relate to meeting the identified needs. The first meeting, early in March included six LAT members, the linker, and four SAT members. RBS presented a formal workshop in classroom processes related to student achievement. The LAT chose variables they were interested in relative to their program and the SAT and LAT worked together to determine needed instrumentation. The second March meeting was the linker working with the six LAT members in data collection efforts. Data collected were provided to the SAT which prepared a program analysis summary. The SAT felt the LAT was really into the process.

On April 14, 1977 the SAT presented the summarized program data to the LAT. This meeting included the six LAT members, five SAT members and the linker. In addition to the completion of the needs assessment/program analysis phase, introduction to selection was scheduled to take place. However, the LAT had already discussed

possibilities of "selecting" team teaching and language laboratory as implementation strategies, prior to going into the PSIP selection process. The project evaluator presented a series of "one liners" based on comments made by one of the LAT members:

1. Method used in scheduling students for reading and English
2. Interest level of materials used by lower ability students
3. Lack of necessary material to meet objectives
4. Matching is difficult due to limited variety of materials, use of test data for assignment is limited
5. Grouping practices.
6. The sequencing and pacing of materials
7. Integration of language arts department within and outside department
8. Appropriateness of materials in library.

There was concern on the part of one RISE linker that the LAT never realized an "ownership or internalization" of "one liners" produced at the end of program analysis. This meeting evidenced LAT confusion and some disappointment in the problem definition-selection transition phase. The LAT expected more directed "judgment" type feedback from the SAT, but did not get it. This situation created internal strain among the SAT members and made the RISE linkers, who were responsible for the selection phase, very uneasy.

The end of the problem definition phase could be characterized as follows:

1. Multiple, somewhat independent problems were identified.
2. There was lack of LAT consensus and group understanding of the problem areas.
3. Some LAT members didn't feel all the work put into needs assessment/program analysis had brought them much further from their original problem statement. Prescriptive expectations of the LAT were not realized.
4. LAT members differed in their interest in the identified program concerns.
5. There was concern or question on the part of the LAT as to support they could expect from the district and building administration in doing anything about their problems.
6. The LAT was faced with the disruptive actions of one of its members.
7. The SAT interrelations were somewhat strained by the results of the problem definition discussions of the LAT.
8. The linker was in the position of trying to facilitate communications and positive working relationships between two groups which were internally insecure.
9. RISE was faced with attempting to identify R & D products over broad, underdefined, unagreed (LAT) upon (in terms of priorities) areas of problems.
10. There was "selection" taking place on the part of independent LAT individuals or small groups prior to the PISP selection phase.
11. The project evaluator was feeling role fragmentation. There was conflict between being an internal evaluator and content area specialist at the same time.
12. The SAT was getting more of a feeling that the LAT was not working as a group and that there was a low level of inner-group communication and LAT communication with the building administration.

2. Linkage analysis

a. Linker associations with the site

During the needs assessment/program analysis phase, the primary (IU-A) linker had high involvement with the site. In addition to work with the LAT in the SAT-LAT meetings, the linker worked individually with the LAT and the site administration. The linker pre-project relations with the site administration had a strong influence on the LAT continuing in the project. To some extent, the LAT may have been afraid of dropping out of the project because of the administrator - linker relations. The linker's recognized (by the LAT) role in the project was viewed primarily as an organizer not as a change agent in the typical sense. The linker had no appreciable role in developing the technical procedures of needs assessment/program analysis and made no technical presentations to the LAT. Thus, the LAT did not view the linker as a change agent with technical expertise in variable identification, data collection, data analysis, or synthesis skills. These skills were attributed to the SAT members. LAT members did not perceive the linker and the SAT members as having similar skills but using them in a shared responsibilities manner.

In terms of the secondary linkers, the LRDC linker provided the most contact with the site, primarily through concentrated work with the IU linker. This function was primarily the most direct contact with the SAT on the part of the linker. There was very active involvement of the SAT agencies with the LAT in group meetings. In about all of the LAT/SAT meetings representatives

were present from each of the SAT agencies. There was, however, some confusion on the part of the LAT as to agency purposes and functions in the project. This was coupled with some SAT personnel changes and, occasionally, additional "experts" being brought in for certain purposes. In addition, the role of the project evaluator was not understood by the LAT. While the LAT recognized the presence of an evaluator, they weren't clear as to what evaluation was taking place. They also observed the project evaluator serving in a content specialist role separate from the evaluation role.

Since this was one of the first sites to use the project materials, there was some problem in the SAT presenting an "orchestrated" philosophy and approach to the project processes. This somewhat natural and even minimal lack of SAT orchestration was picked up by the LAT and somewhat strained the working relationship of the LAT and SAT. Time and again, the LAT questioned the rationale for doing all of the needs assessment procedures. Neither the linker nor SAT were able to overcome these LAT concerns on a permanent basis. The LAT felt the process was too drawn out and expected more direction from the SAT. The SAT was not together in the amount of direction it should provide the LAT.

At the end of the problem definition phase, the links between the LAT and SAT were somewhat strained. The expectations of the LAT to find out, or more accurately, be told what their problems were, was not realized. Within the LAT there was a lack of group cohesiveness necessary for group decision making. There was

a great deal of differential ownership of the problem areas. The lack of LAT group consensus on problems and lack of commitment to the entire process and the frustration of the SAT as to problem definition results created a difficult situation for the linker. While the linker was able to keep the groups communicating, the ground work for the selection phase was not very well laid. The building principal had not been very involved in the latter problem definition activities. Thus, the LAT was somewhat uncertain about district commitment to doing anything about supporting problem solutions.

b. Linker-host agency relations

There were no major linker-host agency problems for the IU linker during this period. Although there was some concern on the part of the linker's supervisor of the progress being made in the case study site, support for the project and work of the linker remained very high.

While not specifically related to the activities in the case study site, the project director was developing strong host agency relationships with PDE. Upper level PDE administrative persons were kept well informed by the project director. Also, the project director was developing contacts with other PDE projects and state associations. Major project presentations were made at the American Educational Research Association and the Pennsylvania Research Association annual meetings. These activities enhanced host relations of all

the project agency personnel and did a great deal to demonstrate, especially in Pennsylvania, how the agencies could work together in such a massive project effort.

There continued to be strong host agency relations and support within RISE. Commitment and positive host relationships continued in RBS, even though there were some SAT personnel changes. There was some problem in the host agency relationship of the LRDC linker because of some conflict in the expectations of RISE and RBS for LRDC involvement in the development of project products and actual work produced by LRDC. RISE and RBS expected LRDC to provide more research assistance in knowledge consolidation. Some project staff felt resources of LRDC were not being used to provide the needed technical support. There was minor adjustment on the part of LRDC, but not enough to have any appreciable effect on the LRDC linker host relationship.

c. Inter-Agency Relations

There remained good working relationships between the SAT agencies. While there were problems, communication level remained high. The project director was instrumental in keeping the groups working together. Problems of physical distance and personnel scheduling had some effect on inter-agency relations, but none that could not be expected in such a structure. Personal relations were strong. SAT members recognized and used strength areas of each other.

C. Search and Selection of R & D Products

1. Happenings

The case study site was the first site to participate in the selection process. RISE had been responsible for the development and presentation of the selection phase of the project. Selection was designed to be made up of four steps:

1. Orientation and decision rules
2. Identification of selection criteria
3. Application of criteria to R & D outcomes
4. Presentation of selection to decision makers

Selection was introduced at the end of the April 14, 1977 meeting. The somewhat disenchanted attitude of the LAT relative to the problem definition results precluded a very successful introduction to selection. One of the RISE linkers was very concerned about the status of the LAT at the start of selection. RISE had already identified 29 R & D outcomes that were related to the direction the LAT had taken during the problem definition phase. The lack of LAT group consensus on the problems identified and the general nature of the problems made RISE very uneasy. It was recognized that it would take an inordinate amount of time to expose the LAT to all 29 outcomes, yet there was a lack of LAT direction that would permit the SAT to focus on certain of the 29 products. Two other problems became evident. One was the recognition that it was unlikely that the LAT would define its problem to the extent that it would be congruent with existing R & D outcomes. The other concern was related to the

to the selection of one or multiple outcomes. Working with an LAT with personally different priorities and needs made the likelihood of the selection of a single R & D outcome difficult if not impossible to do and still develop ownership and support for implementation.

The first entire meeting devoted to the selection process took place on April 21, 1977. The session included five of the six LAT members, the building principal, the IU linker and, from the SAT, the two RISE linkers, two LRDC linkers, the project director, and the project evaluator. The RISE linkers made presentations on the "establishment of ground rules" and "identification and determination of criteria for selection." Criteria considered important by the LAT were generated. RISE had prepared a list of 29 R & D products that had potential for selection of the LAT. The balance of the meeting was spent by the LAT in reviewing the outcome descriptions in terms of the specified criteria. An additional aspect of this meeting was the provision of eight research references in response to concerns which were expressed at a previous meeting.

The next LAT-SAT meeting included all six LAT members, the principal, the IU linker, two RISE linkers, two LRDC linkers, the project director and the project evaluator. Prior to this meeting, the LAT coordinator and department head had visited a school which was using one of the R & D outcomes. They reported that the outcome seemed to be too expensive and would require too much time to implement. An assistant superintendent from a neighboring school district made a presentation on another of the R & D outcomes which was being adapted in their district. After the presentation, the LAT began an in-depth review of the fifteen outcomes which remained after the initial screening.

It was soon evident that the LAT felt they needed more information on the outcomes for their review and there was disagreement among the LAT members relative to an outcome being selected which would respond to the priorities and interests of only a few of the LAT member. One of the LAT members, who was soon to drop out of the project, requested a search for other outcomes. He stated, in a somewhat irritated manner, "tell us what the cause of our problem is," while another requested more information, but condensed, on outcomes and "whether they're right for us."

The meeting soon degenerated into a discussion in which LAT members demonstrated evidence of lack of consensus on problem prioritization and purposes to be served in selection. The department head indicated that the group had, as they had done before, made decisions that had not been internalized or bought into by the group. It seemed at times to the SAT that the group would "take one step forward and two backward."

The LAT decided to meet alone during the meeting to discuss their future participation in the project. They decided to meet after the LAT-SAT meeting to make this decision. Prior to the end of the LAT-SAT meeting, there was a discussion on analysis of the language arts textbook series relative to objectives and tests used in the school.

The R & D outcome materials were left with the LAT and the SAT waited to hear the result of the participation discussion which was to be communicated to the IU linker prior to scheduling a new LAT-SAT meeting. The LAT decided to schedule the next meeting with the expectation of continuing.

On May 19, 1977 the SAT and LAT met to continue the selection process. The previously mentioned member of the LAT was not present and was said to have dropped out of the program. There was a discussion of

continuation of the project. Three of the LAT members agreed to continue in the project regardless of the R & D product selected while the remaining two were not sure they wanted to continue unless the R & D product specifically dealt with improving reading skills of students in the 80-101 IQ range. The principal was said to have been very much committed to continuing. The meeting included the remaining five LAT members, the IU linker, two RISE linkers, a linker from LRDC, one from RBS, an IU resource person, and an IU Title I person.

After the IU linker presented information to the LAT concerning in-service opportunities, the LAT began discussing several items that were related to selection. The group discussed scheduling and student grouping for the next year. Another item discussed was the lack of information on student performance level when entering the school from feeder schools. The group also discussed the need for materials for use in a school reading clinic. Discussion tended to evolve into areas that were tangentially related such as teacher participation in budget processes of the district and budgeting for the reading clinic. The IU linker attempted to get the group back on the selection task, but was not very successful. Some of the SAT members were disturbed by the discussion in that new information relating to the school decision-making processes came out that would affect the selection and implementation processes of the project. The LAT indicated that they had decided to use a "partner-teacher" approach during the next year. One team of two teachers would work with the 6th grade reading clinic. It was decided to set up a meeting with teachers in the feeder school to determine methods of getting better information on incoming students. In

addition, the LAT expressed interest in inservice activities relating to developing in class use materials. The IU linker indicated that this might be possible to provide such inservice through the IU.

The RISE linker summarized the major topics which had been brought out as: the establishment of a 6th grade reading clinic for the 1977-78 school year, the need for a process to identify students for the clinic, and increased communication with feeder school personnel. The IU resource person agreed to review material at the IU which might be helpful in the clinic program. The general agreement at the end of the meeting was that the LAT wanted an instructional management system. Plans were made for a June meeting of the LAT and SAT.

The June meeting included the five LAT members, the two RISE linkers, the two LRDC linkers, one RBS linker, the IU linker, and the resource person. The LAT coordinator presented a report on a meeting with teachers from the feeder school. After discussing the information which would be provided, the LAT got into a discussion of the number of students that would be served by the clinic. There was also some discussion of the scope and purposes of the clinic. One of the RISE linkers reviewed five R & D outcomes that might be useful in the clinic. Time was permitted for the LAT to further review the outcomes.

The second RISE linker presented an overview of project activities up to that time. The RBS linker introduced the three phases of implementation: development of a management plan, implementation of the plan, and conducting the plan. The LAT split up into two groups, one to discuss planning for the clinic and the other to discuss an instructional management system to monitor student progress in the heterogeneous classes. Each group presented a list of comments and concerns which

they had generated. The IU linker suggested possible activities for work during the summer.

There were no LAT-SAT meetings during the summer. On September 22, the LAT and SAT met to review the June meeting and plan for completing the selection phase of the project. The SAT was somewhat irritated that the LAT had not done any additional work on the project during the summer. A new teacher had replaced the former LAT member who had dropped out of the project and resigned at the end of the previous school year. In addition to the six LAT members, the IU linker, one linker each from RBS, LRDC, and RISE, and the project evaluator participated in the meeting.

The LAT expressed again the need for a management system for the total language arts program. The six teachers had formed into three groups of two teachers for team teaching purposes. One group was in charge of the 6th grade clinic and also taught two sections each of 7th and 8th grade language arts. The other two teams were responsible for two heterogeneously grouped sections each of 6th, 7th, and 8th grade language arts.

Working with the RBS linker, LRDC linker, and the project evaluator, the LAT developed a list of areas which need to be managed in the language arts program. The major areas were: time, materials and equipment, students, content, and instructional events. The LAT then listed ten skill areas which made up the language arts program. At the SAT's request, each of the three groups of teachers independently answered three questions about each of the ten skill areas: what were they going to do in each of the areas during the 1977-78 school year, what order were the skill areas going to be addressed, and who (within each team) was going to be responsible for each area?

The SAT presented a format for collecting additional data on the language arts program. After all of the data collection which had been done in the needs assessment and program analysis phases, the LAT did not seem too eager to do more, but they did not oppose the plan.

Plans were for the LAT to meet in early October to complete an outline on six points presented by the SAT. The SAT were to take the information and make a presentation in an upcoming meeting of the LAT-SAT relative to total language arts program. There was little discussion of selection of R & D outcomes in this meeting. The LAT seemed to be back into a part of program analysis and description. On September 30, the IU linker met with the LAT to schedule meetings of the three teacher teams to prepare the material for the SAT review. The linker picked up the material from the LAT and sent it to the SAT members.

On November 2, 1977 the LAT and SAT met to present and discuss the results of the SAT analysis of the language arts program. The meeting included the six LAT members, the IU linker, one RBS linker, two RISE linkers, one LRDC linker, the project evaluator, and two NIE project review consultants. Prior to the meeting, the LAT members were interviewed by the two NIE consultants.

Four SAT members presented individual analyses of the language arts program. One of the presenters was the project evaluator. In general, the presentations included the following points:

1. There is need for correlating materials used with the skill areas.
2. There is need for consistency across grade levels on student performance records.
3. There is need for planning in scheduling of major areas of instruction.
4. There is need for a system to provide data on students, materials, and student evaluation strategies.

5. There is need for more diagnosis in determining student strengths and weaknesses.
6. There was a feeling on the part of the LAT teachers that there was sufficient time for providing needed instruction. However, there is need to examine the decision for each teacher to deal with all three grade levels.
7. The curriculum outline or course description is available, but it is about four years old and does not seem to exist in a complete form. There is a need to develop minimum requirements for each of the detailed objectives.

In addition to these comments, a report was presented which was sought from an outside consultant. Four points were presented based on this report:

1. There is need for clarifying time spent on teaching of skill areas.
2. The course description, developed four years ago, should be reviewed and updated in terms of present school conditions and staff.
3. There is no uniform record keeping system and student records are not available as students move from grade to grade or subject to subject.
4. The new program description should be developed by all of the teachers and there should be agreement on objectives, materials, and criteria and methods for evaluation.

During the discussion of these points, there were several instances of defensive behavior on the part of both the LAT and SAT. The LAT was somewhat irritated that the SAT was essentially telling them that they needed to start at the beginning to design their language arts program. After the amount of work that the LAT had already done in the PSIP process, they were not very receptive to such an indictment. The LAT coordinator stated that many of these points had been mentioned several times to the SAT during the PSIP process. The evaluator stated that, while they may have been mentioned, they had "never been put on paper." The LAT coordinator stated: "We agree with what you say" (although it seemed that, as a group, they did not agree), "but we're not sure what your propose...."

I got the impression that you're pushing homogeneous grouping. What does the research say?" The evaluator answered with the statement: "What ever you want, either way." Again, the LAT coordinator asked: "Can we get research information to read now so we can discuss the issue?" The evaluator responded by changing the subject back to the need for a structured curriculum. The IU linker entered the discussion by saying: "We're not telling you what to do, you have to do it, own it."

At that point, the SAT was not sure what to do. It directed the discussion to the department head, a member of the LAT. The department head wasn't sure what was being asked, but responded by questioning the approach being taken and stated that "we should have done all of this at the beginning of the program." The LAT coordinator agreed that "perhaps we should start all over." The discussion ended when the LAT decided to meet as a group at lunch to discuss the situation and decide what to do next. While the LAT was at lunch, the SAT had a discussion of what to do when the meeting resumed. When the meeting resumed, the LAT expressed disappointment that it had taken so long in the process to realize that their needs were in the area of curriculum design. While some SAT members felt they had been telling the LAT this all along, the LAT did not agree. The need for developing the entire curriculum, during a reasonable time period, was again expressed by the LAT coordinator. Finding the needed time to do such a job was questioned by the department head. The LAT felt the need to drop out of the PSIP process while they worked on the curriculum.

The SAT agreed and indicated that they would provide an outline

of things to be done, through the IU linker, to develop the curriculum. Involvement of the district superintendent was noted by the LAT, but not the school principal. The LAT coordinator asked what help the PSIP would provide in the effort. Since this activity was not seen by the SAT as a suitable R & D outcome implementation effort, they were not able to offer the LAT much of anything except limited information. A question was raised by the SAT as to the use of the \$1500 allocated to the project for adoption/adaption of selected R & D outcome(s). The department head stated that the \$1500 had already been spent on new English textbooks, much to the surprise of the SAT and IU linker. It was found out at a later date that the PSIP funds had not been used to purchase textbooks, but this revelation occurred after active project involvement.

Internal school district and IU funds were questionable to support an external language arts consultant or release time for teachers to work on the curriculum design. During this discussion, most of the SAT members remained quiet. The IU linker expressed the feeling that he wasn't sure of his role at this point. No one seemed to be able to provide him much assistance.

The IU linker expressed frustration "I'm not linking either group." It was obvious at this point that the IU linker was considered by both the LAT and SAT as having SAT more than LAT group allegiance. The IU linker left the room and was about to leave the building before being calmed down by the project evaluator.

The SAT didn't know what to suggest and the LAT felt they needed more time to discuss what they needed and what they would do. The LAT department head indicated that it wouldn't be fair to the LAT or the project to make any commitments right then. He said the LAT would meet during the next week and report back to the IU linker on LAT decisions on tasks to be done, time frame, and need for financial assistance. One reason the LAT wanted to put off making any decision was that the principal was out of town and they felt they needed to discuss the situation with him.

The SAT agreed to provide the LAT with a guideline to help in arranging the curriculum design effort in addition to a written composite of SAT observations and comments made in the morning part of the meeting. The SAT agreed to provide the LAT with a list of resources that might be of help in their work. It was agreed that the IU linker would follow-up with the LAT to check on progress and provide assistance where needed. The meeting adjourned at about 1:30. There was a somewhat uneasy feeling on the part of the LAT, SAT, and linker when the meeting broke up. One of the LAT members, as she walked out the door said good-bye to the SAT: "We probably won't see you for a long time now, we'll miss you."

After the LAT left, the SAT and linker had a "debriefing" or more like a group catharsis session. The discussion, in general, went as follows:

1. The project evaluator questioned whether the LAT saw this as the end of the process, "Was this the end product of the effort?" The evaluator was very upset about the "sheepish manner in which (the LAT) announced that the money had been spent." Blame for this was placed on the building principal.
2. The linker said "maybe this is all my fault."
3. A RISE linker wanted to know "What's left of their commitment?"
4. The RBS linker wasn't sure if the LAT really understood what they really needed to do, "Are we coming back or is it over, do they expect us to help?"
5. The IU linker was taking everything very personally. He did not actively participate in the discussion and shortly left the room.
6. There seemed to be total confusion as to what had happened and what to do about it. There was a question as to whether the LAT would re-enter the selection process after getting their program together. Concern was expressed by a RISE linker that the LAT probably would never select an R & D outcome.
7. The IU linker came back into the room and indicated that he wanted to step out of the entire situation. SAT members tried to calm his feelings. They pointed out that the LAT

was better off than they had been when the project started. The evaluator supported him by calling him a "good linker." The RBS linker stated that she "didn't know how (the linker) could cope with the situation since he didn't really know what was happening within the situation." Expenditure of the project funds and unexpected changes the LAT made from meeting to meeting were cited as examples.

8. The role of the IU linker was discussed. It was obvious that the linker was considered more a member of the SAT than perhaps had been intended in the project design. His feeling of frustration was going to make it difficult for following-up with the LAT. Concern was expressed by the LRDC linker that the IU linker wasn't sure if he understood what he needed to do with the LAT.
9. Some SAT members felt they should have made better plans for this last meeting and that things had gotten out of hand.
10. It was agreed that the present situation in the case study site was outside of the intended PSIP strategy, but there were no project policies which could guide the SAT in dealing with this contingency.
11. A suggestion was made that the IU linker should have worked with the LAT prior to the meeting so that the SAT could have been more aware of the situation and thus planned for it.
12. The evaluator called it a "crazy situation." SAT members and the IU linker were feeling some guilt and were attempting to place blame or rationalize the reasons for the situation being a result of conditions beyond their control.
13. The problem of how much direction should have been provided by the SAT again surfaced. Some SAT members felt they had allowed too much latitude and democratic participation of the LAT.

The meeting ended with making plans for follow-up with the LAT by the IU linker and the provision of promised materials to the LAT by the SAT.

The situation at the end of the selection process or, in this case, the end of active project participation could be characterized as follows:

1. The LAT decided to drop active participation in the PSIP project.
2. The LAT was somewhat disappointed that the process had taken so long to result in a decision that they needed to further design their curriculum.
3. Three different subgroups were apparent within the LAT, each with different interests and perceived R & D outcome needs. Seeking an instructional management system was agreed upon as a potential R & D outcome which would be of value to all three groups, but not the primary interest of the total group.
4. From the beginning and up to the end of project participation, the SAT had been very non-directive with the LAT. The LAT seemed ill prepared to deal with the prescriptive nature of the last LAT-SAT meeting.
5. It was apparent that the LAT had been making decisions which had not been discussed with the SAT and while many of the decisions were tangentially related to project activities they nevertheless affected LAT-SAT communications and cooperative relations.
6. There was little or no effectual support provided by the principal. While the superintendent seemed more interested in the project, he was not able or did not feel it appropriate to become very actively involved.
7. There was a realization by both the LAT and SAT that the language arts program was not sufficiently well defined to support the selection and implementation of an R & D outcome.
8. The SAT was in a state of dysfunction. While on several prior occasions the LAT had been close to dropping out of the project, the SAT had been able to keep things going. They had been aware of the possibility that the LAT might drop out, but the decision, at this point, seemed to come as a surprise. There were no project policies to guide the SAT when a group dropped out so far into the process and at the same time requested assistance for non-R & D selection activities.
9. Both the SAT and the linker attributed the situation to external influences beyond their control.
10. The linker blamed himself for the LAT dropping out of the project and did not seem very interested in following up with the LAT in their curriculum development effort. Moral support and consolation were provided by SAT members.

11. The project evaluator's role had become very much as an active SAT participant rather than a project monitor.
12. Presence of the NIE external consultants at the last LAT-SAT meeting created somewhat of a strain on the working relationships of the groups. The LAT had somewhat of a feeling throughout the project that they were observed and "evaluated" too much. A point of conjecture is that the LAT may not have dropped out had the meeting been more like the other LAT-SAT meetings.

2. Linkage Analysis

a. Linker associations with the site

While the LAT always felt the IU linker was available if needed, they did not include him in many of the decisions that were made between LAT-SAT meetings. Communication was mostly organizational rather than provision of technical support. IU linker responsibilities in other sites and working with SAT agencies took a great deal of time, so the IU linker was not able to push for greater involvement in the case study site. The IU linker's relationship with the principal remained cordial but the principal seemed unwilling to get involved actively with the LAT and this created great concern on the part of the LAT as to administrative support of program change. It seemed that the LAT perceived the IU linker as an organizer of meetings and a informational communicator between LAT and SAT and not as a technical advisor or change agent. My impression is that the linker would have had a difficult time working with the LAT without the massive assistance effort of the SAT and that the LAT coordinator could have worked through the SAT-LRDC linker almost as effectively as through the linker. I don't want to convey the impression that the IU linker was not competent, it's just that since this was an early effort, it seemed that the SAT expertise had an overbearing effect on a linker who had little technical

training and low involvement in the development of project processes (modules). The IU linker's activities in LAT-SAT meetings were mostly organizational and provision of routine information. The rather independent approach of the LAT and the degree to which the LAT questioned the project activities which were presented by SAT agency personnel and not the linker, created a situation where the efforts of the linker were not pervasive. In addition, the relationship of the linker and SAT members, as perceived by the LAT, was one of a very friendly nature and may have lead to a feeling of the LAT that the linker was more socially aligned with the SAT and was thus not really their advocate, but more an SAT advocate.

The SAT as a group never developed a cooperative relationship with the LAT. While some activities and meetings went very well and stimulated confidence, it seemed that each time the groups met there was need for building the relationship again. Discussions of the SAT about the case study site were always in a "we-they" form. The IU linker had the same approach and his "we" referred to the linker and the SAT. While the LAT perceived the SAT to be very knowledgeable, competent, and had things to offer that they needed, they still seemed to be somewhat overwhelmed by the SAT. In many of the meetings there were as many or more "experts" than teachers. This combined with a feeling of insecurity and lack of group cohesiveness of the LAT seemed to create a need on the part of the LAT to make independent decisions to avert what they thought might be "control" of the SAT. The LAT felt a need to display independence and did so through making decisions that affected project activities. Another factor in this LAT's behavior was a need to "look

out for themselves" since they felt the principal would not look out for them. Had the LAT not been a complete department, this strategy of self-preservation may not have been as possible or influential in the project.

In terms of individual SAT member relations with the site, there are two aspects which should be noted. One of the RISE linkers had a difficult time developing rapport with the LAT. This was a result of two factors that can be identified. One, this RISE linker had a somewhat different view of how the SAT should deal with the LAT, which was in terms of providing much more direction to the LAT. This difference of approach was perceived by the LAT. Secondly, the RISE linker was greatly frustrated by the indecision of the LAT to focus and persevere in the search for specific R & D outcomes. This frustration was observed by the LAT.

The second aspect of individual relationships with the LAT was in the role of the project evaluator. While the project evaluator's original role had been perceived as an internal project monitor, it soon became apparent that the evaluator was perceived by the LAT as a "reading specialist" and active participant in the process rather than a monitor. The LAT was uncertain of the evaluator's role. This was further complicated by the fact that the evaluator was the only PDE participant in most of the LAT-SAT meetings and was thus faced with addressing project management concerns in addition to evaluation and content concerns. While this matter had some influence on relationships in the site, its primary influence was on interagency relations.

b. Linker-host agency relations

At the IU level, there seemed to remain strong support for the IU linker. While there was concern about what was happening in the case study site, other sites seemed to be progressing well. Lack of progress in the case study site was not viewed as a reflection of the work of the linker.

Relations of secondary linkers were not significantly affected during this phase of the project with one exception. Relationships of the project director and evaluator to their host agency (PDE) were greatly improved. Through the work of the project director, the effort of the project was made known to many other PDE departments. Communication and involvement of upper level PDE administrators, service units, and special project, was sought and accomplished which lead to high project visibility. In addition, other IU's were impressed about project activities and possibilities of future involvement.

c. Inter-agency relations

Inter-agency relations were somewhat strained as a result of the case study site situation. In particular, there was some strain between RISE and the other agencies because of different philosophies about dealing with local school sites and one RISE linker's frustrations about LAT changing interests in R & D outcomes. While these affected inter-agency relations, the individuals should be credited with handling concerns in a very professional rather than personal manner.

The role of the project evaluator had an effect on inter-agency relations. As a member of the central project staff at PDE, the evaluator was often placed in a position of representing the management

function of the project. Since the evaluator was somewhat reluctant to make management decisions on the spot, there was some delay in making decisions and facilitating communications.

Relations between the project and NIE are of interest at this point. While NIE project monitors were very supportive of the project, there were a few issues that affected the project functions. NIE project personnel were somewhat concerned about the ability to institutionalize a project with such a heavy professional involvement aspect. In addition, some concern was expressed about the generalizability of the project to an urban situation.

The situation was confounded by other events. NIE was in a process of pending reorganization and the future of the R & D Utilization Projects was uncertain. While the project welcomed the review of the NIE consultants, there was concern that the limited exposure the consultants would have might lead to a report that lacked scope and it was not clear what decisions would be made as a result of the review team's report. There was a feeling on the part of the project management that the seven R & D projects were in a state of competition for future funding and that the review results would be used in that decision. NIE tried to make it clear that the reports were for use by the projects for internal improvement, but the project management was still concerned. Once the report came out, the project staff felt it was not accurate and was uncomplementary to the project effort. A report was presented by the project to NIE to attempt to counteract what project participants considered to be unwarranted conclusions made by the review team.

Another condition which influenced project inter-agency relations and project - NIE relations was the situation in the other project IU site in Eastern Pennsylvania. Conflict had arisen regarding the work of the IU linker in the second site. While this is described in greater detail in another case study, it is of value to discuss it in this report in general terms since it did influence the total project. The IU linker in the second site felt she was unfairly being compared with the linker in this study. The project director was attempting to straighten out the situation but was having a great deal of conflict with the IU personnel in solving the problem. The situation was brought to a head in a project staff meeting where the project evaluator presented a yearly project evaluation report which included what many project staff considered biased interpretation of data relating to the second site linker. The project evaluator resisted making any modifications in the report. The IU administrator was permitted to attach his comments to the report before being sent to NIE. The situation in the second IU had become very tense and it was requested that NIE personnel come into the site to mediate the situation. This situation created some strain between NIE and the project which was relieved when the second IU linker resigned. While, in general, the SAT agency personnel agreed that the second linker was not performing adequately, they were distressed by the evaluation report and supported the second IU administrator's request to have it modified.

D. Post active participation in case study site

1. Happenings

On November 11, 1977, the IU linker delivered to the LAT the suggested guide provided by the SAT. A meeting of the linker, the principal, and the LAT was held on November 18. In that meeting the LAT decided to rewrite the language arts curriculum in terms of what and how language arts should be taught in the middle school. They decided to have weekly meetings and the principal assumed the role of department chairman for this effort. On February 10, 1978, the linker met with the principal to follow-up on progress to date and deliver resource material from the SAT and IU. The LAT had been active in planning for separate sets of skills in English and reading. They decided, which was consistent with prior behavior, to divide into two separate departments. The LAT thought they might like to meet again with the SAT in April but such a meeting was not arranged since the LAT decided to complete their work without further involvement of the SAT.

2. Exit interview

On May 31, 1978, the project evaluator conducted exit interviews with the following persons: the superintendent, the principal, the guidance counselor, the department head (a member of the LAT), the LAT coordinator, and one other LAT member.

The superintendent indicated that he was disappointed in the LAT involvement in the project. He cited lack of leadership at the building and LAT levels as the major reason for lack of involvement. He indicated that he felt there were some "hard feelings" between the LAT and SAT.

The principal indicated that participation had created an awareness that there was a problem, but the time spent in analysis was a problem since interest seemed to lag. The guidance counselor agreed that the process forced people into facing the problem, but teachers felt the process was not having any effect on what was happening in their classrooms. The superintendent, the principal, and guidance counselor considered the IU linker a "good coordinator" who served as an "ombudsman" settling differences and disputes within the LAT and clarifying issues between the LAT and SAT. The principal suggested that the PSIP process must be presented in "real" language, time spent on analysis should be shortened, and more "definite direction" provided to teachers. All three agreed that the linkage function was needed and consistent with the IU mission.

The three LAT members agreed that involvement in the process had been beneficial. Conflicts within the LAT and non-working members were mentioned as problems by the LAT coordinator. She went on to state: "I don't know why we dropped out, we shouldn't have, the process was good." Both the LAT coordinator and department head felt there was support from the superintendent and principal, but, in making the comment "we had a free hand", support seemed to be mistaken for lack of intrusion. Positive results indicated by the LAT coordinator were: the development of new attitudes toward teaching, resources provided that were helping in the curriculum work, and data provided through student and program analyses.

SAT members were viewed as being very willing to help. One concern was expressed about one of the RISE linkers being a negative influence. The LAT coordinator indicated that the material presented in the last LAT-SAT meeting could have been presented differently.

Both the department head and LAT coordinator had positive things to say about the IU linker. One stated that he provided all sorts of information, but the LAT needed more guidelines. The LAT coordinator felt the IU linker should have been around more when the LAT worked on its own. The IU was seen as an appropriate setting for the linkage function. One suggestion was that the linker work more closely with the superintendent at the beginning of the project to get accurate information.

Suggestions for improving the project were mentioned as: set specific goals for each activity and tell the LAT what these goals are, do program analysis first, the SAT should have given more direction, we needed someone saying "do it now," there was too much "here it is, now do what you want to do." The LAT coordinator cited as the reasons the LAT dropped out of the project as: "we had a feeling of a lack of guidance, at the end it appeared we were going back to square one, and certain SAT members (need to) take a course in how to handle people." The department head stated "we felt misled, we believed the SAT had taken a comprehensive look at our program, at what we had before we started, we thought the superintendent had a copy of the total curriculum and that the SAT had it too, there wasn't a copy of it anywhere. I guess there was a lot of fault in both sides on this."

Changes in the language arts program attributed to participation in PSIP were: the separation of reading and English with separate grades for each, the institutionalization of an individualized reading clinic, and different scheduling. The LAT coordinator stated: "We won't work in teams next year."

3. Linkage Analysis (site relations only)

This section presents commentary on linkage relations with the site which relate to the information collected through the exit interview.

a. Within site

It seems that about the only common characteristic of LAT members was that they were members of the same academic department. The LAT as a working group never materialized. There was always at least two subgroups and at times individuals who were either very vocally disagreeable or quietly adamant. It is of little surprise that the group separated into two departments and had given up on the team-teaching approach. The only times the group presented a common front was when it felt it needed to protect autonomy from what they perceived as SAT domination. It is an interesting contradiction that the LAT expressed need for greater direction from the SAT, yet whenever the SAT seemed to get more directive, the LAT acted threatened and seemed to try to side-track the process by requesting a caucus to decide whether they wanted to continue. There is a considerable amount of evidence that this group would only work together if pressured by administration, but there was no such pressure. There was virtually no support from

the administration. The group had nothing to lose in the decision to remain or drop out of the project. I'm reminded of the Mark Twain quote "It's easier to stay than get out."

b. Project site relations

The exit interview pointed out some aspects of primary and secondary linkage efforts which should be mentioned. While the IU linker was seen as a good organizer and information provider, the LAT seemed to desire more guidance, technical assistance, and participation in LAT work done between LAT-SAT meetings. Even though the LAT felt a need for more help from the IU linker, they rarely initiated the contact with the linker and thus did not seek his assistance. Project management assumed that since the IU linker was very personable and had a great deal of experience in the school district, there was little need to provide training for the linker. However, the linker felt uncomfortable dealing with more technical aspects of the project work such as in data collection and analysis. The linker felt the need for training in these areas. Continuing PSIP process activities without the technical support provided by the SAT agencies, even if the PSIP modules were available, would be difficult for the linker without additional training in technical skill areas.

LAT members were positive about the SAT members and the process, except for concern about too much time spent in certain activities. A somewhat negative attitude was expressed by one of the LAT members toward one of the RISE linkers. The LAT member felt the RISE linker was more concerned with presenting information than helping them with their problem. An interesting aspect of this situation is that while the LAT was asking for more direction, this secondary linker was one of the most vocal advocates within the SAT for providing more direction to the LAT.

Looking back on the experience, members of the SAT have made the following observations and thoughts:

1. PSIP project expectations were too high. SAT members expected more rational behavior from the LAT.
2. The prior role of the IU linker in the school district gave the LAT a set of expectations that were not always congruent with the linker's role.
3. Working with a middle school group might have been more difficult because of pressures placed on teachers in a middle school situation that might not exist in an elementary school.
4. The SAT didn't adjust very well to the situation.
5. More research needs to be done on the "process" approach to R & D utilization.
6. Being in a project developmental phase while working with the LAT may have given the impression of disorganization at certain points in the process.
7. Internal leadership fluctuated within the LAT. Leadership which was perceived by the SAT was not always leadership as perceived by the LAT.
8. There was little inner group communication within the LAT.
9. The SAT became so involved in the process that "we weren't thinking enough about the site."

At the end of active involvement with the case study site, LAT members, SAT members, and the IU linker were frustrated but felt the experience was valuable for the LAT and very instructional for the SAT and linker. Although the LAT never selected or implemented an R & D outcome, there seemed to be some recognizable growth. However, after project involvement, the LAT seemed to go back into former independent relationships and further separate themselves from each other through departmental division into two departments and dropping team-teaching approaches.

IV. Analysis

A. Inter-agency level

1. General project structure

The PSIP participating agencies began the formal process of project organization during the preparation of the PSIP proposal. The IU linker in IU-A was included in these sessions. While the SAT formally began working on the project in July 1976, the SAT was not fully constituted with its present working cadre until the PDE hired the project director in September 1976, and the evaluator in October 1976. Operating for three months without primary project personnel designated for each agency obviously slowed project development in the first few months. PDE could not provide the needed attention to the project or provide continuity in management and evaluation functions until the PSIP project staff were hired. This situation clearly left the other three SAT agencies in ambiguous positions, towards each other. Some later difficulties with task completion on specific project phases may be related to these delays in achieving a full staff complement. Throughout that period, RBS provided overall coordination and leadership for much of the project. The RBS role in the SAT is not simply a matter of its early involvement in the project planning. Within PSIP, RBS had primary responsibilities for the needs assessment and implementation phases of the project. Hence, RBS responsibilities somewhat structure the type of activities as well as the efforts of LRDC and RISE contributions in any particular site. Obviously, this does not mean that more basic research and knowledge consolidation are dependent upon research and development concerns, but the R & D functions

of RBS, in general, delineate its key role in PSIP (or any other utilization program). Such an agency provides a linkage between basic research and product development and utilization in particular schools. The RBS competence in needs assessment and problem definition may have had a significant effect on the type of educational R & D outcome most applicable to the situation at hand. Also, while the knowledge consolidation phase of PSIP, lead by RISE with the aid of LRDC, was initiated simultaneously with needs assessment, the particular information being reached and consolidated was tailored by requests and decisions emanating from needs assessment.

In general, the ability of PDE, LRDC, RISE, and RBS to function as an effective unified project organization has been remarkable. However, particular points of strain have been visible in the operation of the linkage structures over the course of PSIP implementation in IU-A. The SAT has done a rather good job in anticipating many of the problems, and agreeing on mechanisms for their solution. The management work of the project director has obviously helped in this regard.

2. Agency linkages, compared with other possible arrangements

This section describes the linkages within the SAT made up of representatives from PDE, LRDC, RBS, and RISE.

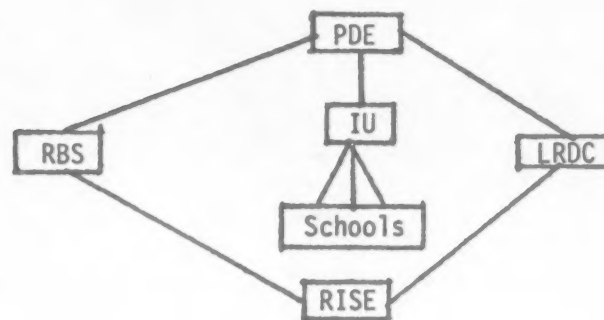
In terms of program structure, the PSIP objective is delivery to local schools of greater expertise and information concerning local school problems through the creation of new interorganization arrangements among the school assistance units. There were several motivations for the new agency arrangements in Pennsylvania. LRDC, RBS, and the PDE

were exploring possible collaborative arrangements prior to the announcement from NIE of the Research Development Utilization Program. These discussions had a great deal of face validity: that various service agencies in the state could make a greater impact upon local school improvement if they would coordinate their separate competencies within one identified, focused project. These discussions were still in an exploratory phase when NIE announced the R & D utilization program. The RDUP had similar, but perhaps narrower goals: to improve the frequency and effectiveness with which research and development outcomes in the educational field were adapted by local schools. As this national program solidified in an RFP, it was seen by the Pennsylvania agencies as a possible vehicle for implementing the original ideas of RBS, LRDC, and PDE.

The main difference between the NIE project goals and the Pennsylvania agency directions is perhaps attributable to the greater degree of formalization in the NIE program, yet this difference has probably had more impact upon the kinds of new arrangements that finally were established between the Pennsylvania agencies and the ability of the agencies to work effectively within the RDUP context. To the extent that the evaluators can recast this difference in goals from a post hoc vantage point, it would appear that the RDUP has elaborated with agency coordination around the objective of R & D outcome utilization, while the preprogram agency discussions in Pennsylvania would have produced a interagency network whose characteristics were more closely tailored to the specific agency competencies and missions as

perceived by each individual agency. Stated in another way, the inter-agency linkages that have actually been delineated through the RDUP are primarily determined by the needs of a particular program task (R & D utilization). The alternative arrangement (if the agencies had been left to explore their own collaboration) may have yielded a broader set of services to schools, based primarily upon the interagency network that seemed most compatible with pre-existing agency missions and competencies.

At any rate, the current Pennsylvania School Improvement Program has established a new set of interagency communications and working channels based upon the goal of research and development outcome adaption in local schools. The current linkage arrangement calls for the PDE, RBS, LRDC, and RISE to bring different but related (and sometimes overlapping) skills concerning the learning process to local schools through specific intermediate units linkers.



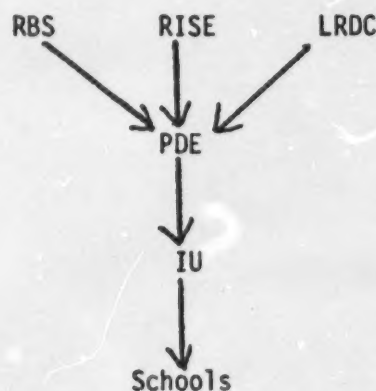
The PDE provides overall program management, coordination, and evaluation. LRDC, as an educational center is to provide primarily basic research knowledge on learning process and structure. RISE, as an information retrieval and dissemination agency, is to provide leadership on

knowledge base consolidation and processes by which local schools select problem resolution strategies. The role of RBS is to provide leadership on needs assessment, program analysis and program implementation in local schools. Moreover, RBS, as one of the principal participants in both the early agency discussions and the PSIP proposal development, has taken on general program development responsibilities. The IU, primarily through the IU linker, is a key agency in the new arrangement. The IU is responsible for coordinating off site agency activities with on site school activities, providing the SAT with background information about each specific site, and coordinating activities in each local school district.

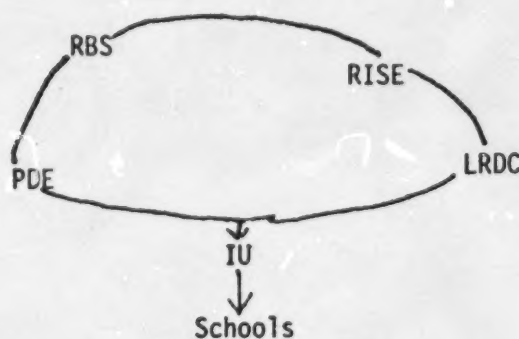
The PSIP interorganizational arrangement is a complex one that sets up a variety of interfaces and interdependencies that did not exist prior to PSIP, and perhaps would not be necessary to other types of R & D utilization projects. The most unique distinguishing characteristics of the current PSIP linkage structure is the intertwining, even on a direct face-to-face basis, of all involved units. There are direct interfaces, for example, between the local school participants and representatives of SAT. There is also greater contact and interaction: (1) between SAT unit and other members than was previously the case, (2) between the outside agencies and the IU, and (3) between specific IU's and local teacher groups.

In order to realize the extent of the new complexity introduced into the Pennsylvania school system through the PSIP, it may be helpful to consider a few other possible linkage arrangements. For example, it

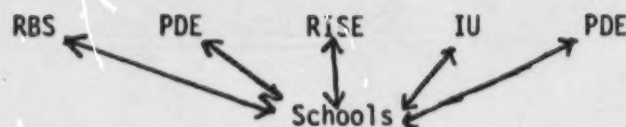
would have been possible to maintain general independence among service agencies, and have their separate contributions integrated by a single on-line education agency. Such as:



On the other hand, it would have been possible to integrate the outside agencies directly, but maintain their removed position from the local schools. In other words, work directly with the IU coordinator who then would be the only contact person with the LAT. Such as:



Any of these other arrangements is still more complex than the situation prior to PSIP, in which each agency dealt, basically, in an entrepreneurial basis with separate agencies:



Any of these other arrangements probably have some advantages over the pre-program arrangement, because the pre-program situation provided no integration of different school problem solution services other than those that individual schools themselves could provide.

Both the current PSIP linkage structure and the alternative structures have advantages and disadvantages, which vary according to school problems and the assumptions that are made about different problem solution strategies. Outside agency interface is probably advantageous to the extent that separate agency outputs need to be inter-related in order to gain greater benefit from any of them. Outside agency integration with local schools is probably advantageous to the extent that problems on the local school level are variable or indeterminate and agency outputs need to be tailored or adapted to individual site requirements.

The disadvantages of these new exchange structures are related to their strong points. Highly interdependent or highly complex structures require greater managerial and coordination efforts. Communication lines increase exponentially and points of possible conflict or disruption increase simultaneously. Similarly, increased interdependence means just that: the different components in a complex structure are unable to act upon their own internal agendas. Joint products require collaboration actively and the failure of one unit to keep pace or produce affects all other components in the system.

In contrast to the PSIP linkage structures, the other options maintain greater division between units and longer sequences in the communication chains. Greater separation, or specialization of the SAT members is probably advantageous to the extent that different agency services or products are either completely independent or modular. Greater separation of the local schools from the outside agencies is probably advantageous to the extent that the different products or services provided by any of them are complete and can be installed in any school without modification or consultation during implementation.

The disadvantages in the more separated and sequential systems are also related to their advantages. These arrangements call for a greater amount of stabilization and standardization in both products and product uses (or problems) than is frequently the case. Secondly, extended communication links through several sequential steps, much like the child's game of whispering down a line, requiring absolute accuracy in both sending and receiving messages. This type of communication system is much more likely to break down than a more complex one because there is less redundancy. Moreover, the more sequential systems provide for less immediate and usable feedback, both from service/product users to developers (about problems in design) and from developers (about implementation).

The initiation of the RDU itself would seem an indication that the traditionally specialized and separate service providers and the traditionally independent users were not previously successful in utilizing, to any great extent, R & D outcomes in improving the achievement of students. It appears to be the operating assumption of PSIP

that interdependence and complexity had to increase greatly, rather than slightly, both among SAT members and between the SAT and local schools in order for R & D adoptions and adaptations to increase significantly or be effective. About the only other new structures that would be more complex or provide to local schools more intensive coverage than the present one would either place the outside agencies in a permanent relationship with each local site or install similar agency capacities in every IU.

3. Potential for SAT agency conflict in PSIP

Problems of role strains and role conflicts in the dynamics of the linkage structures are ones that have a higher probability of occurring. Broad scope projects are always difficult to implement within one organization. Developing a stable and effective project organization across several independent units is considerably more difficult and less easily analyzed within existing management principles and strategies. Since there is no permanent absolute higher authority binding the members in an interorganizational arrangement, the effectiveness of the arrangement for achieving project goals is more dependent upon the costs and benefits of the relationship for each of its members than would be the case in a single organization project.

Many interorganizational structures are remarkably unsuccessful. There are three modal types of structure which may be useful in looking at this project structure. Perhaps the most common form is a federated arrangement, such as a council or board, in which each organization

maintains its autonomy, and participation in the joint arrangement is strictly voluntary (and often occurring in the council members' own time). Such interorganizational structures can be valuable, but functions are often limited to exchanges of information. Participation of each organization in the federation is determined by the extent to which individual organizational goals are achieved or strategic positions enhanced by the activities of federation. Organizational merger provides another example of interorganization exchange. In this instance, one organization actually assumes the resources of another, or a new organization is created out of two or more disbanded ones.

Between these two extremes, exists the third arrangement, a joint or multi-unit project organization such as is represented in this project. In this arrangement, each unit maintains its autonomy, but shares authority with other units for the completion of a project task. It is usually a temporary arrangement, but one in which the same units may engage several times, on several different projects.

The structure and function of the joint project are different than those of either confederation or merger. Structurally, the joint project forms its own single organization, where the individual units intersect, but only for the completion of the project. Functionally, the joint project structure is to have primary benefit for the project itself, where as confederations and mergers primarily benefit the existing, or remaining individual units. Stated differently, the organizational goal in federation and merger is still that of gaining for the organization a better strategic position in its operating environment. While the individual units of the joint project may well benefit

from engaging in such an arrangement, achieving those benefits from such a structure are never so certain as they are in the other two, and the costs may be seen, by at least some of the members, as exceedingly high. Compared with the other two options, a joint project is a poor cooptation strategy. Its function is much less organizational survival than completion of a task -- a task that is not as easily accomplished by single units on their own. In all seriousness, then, this arrangement is more likely to be engaged in by organizations that are highly service oriented, or in anthropomorphic terms, very altruistic. While it would be folly to discount the self-serving or survival motivations of LRDC, RBS, and RISE in this project, understanding their operation as a joint project organization is best approached by noting their high commitment to the project goal, rather than high commitment to improved chances organizational survival.

This basic assumption has some implications for the types of organizations and organizational participants best suited to carry out the arrangements. They should be organizations whose autonomy is not threatened by sharing authority. This would seem to require organizations who have a clearly established mission and organizational domain, which is neither dramatically changed or impeded through cooperative efforts. It may be easier for relatively different rather than very similar organizations to cooperate for this reason. Furthermore, it is likely that these organizations should be relatively new, rather than old. Established organizations are less likely to be able to accommodate the internal strains and structural modifications necessary to the inter-organizational innovation. Also, these organizations should probably

be relatively similar in size, and not too large. In a joint project, power balance among participants is probably necessary for resolution of conflicts. Unequal size and power will pressure the joint structure to move toward merger or federation, either of which would jeopardize the meeting of the project goals. Lastly, the organizational members who form the actual staff for the joint project should display particular characteristics themselves. They will need to operate in conditions of high uncertainty. This is better done if their organizational roles are well established. They should be near the top of their respective units and/or have a stable ongoing relationship with their own agency. As an alternative or a corollary to this, the project staff should be individuals whose career objectives are more determined by project outcome than by their organizational position. In terms of the project success, its' staff need to be in a position to successfully interact with other members of their own organization in terms of resource allocation. At the same time, project staff need to be able to speak for their organizations in the immediate situations of joint project activities.

In the case of the SAT, these conditions seem to be met more often than they are not. The organization that can be expected to face the most strain, and demand the most from its co-participants, is RBS since its ongoing organizational mission seems to more closely resemble that of PSIP than is true of the others. In other words, RBS is the unit that would most likely have conducted such activities on its own, and is most likely to do so in the future. In fact, the RBS five year plan includes activities similar to those found in the PSIP project.

The agencies in the SAT arrangement should be expected to conflict most frequently at those places in the project where there is (1) most overlap in project roles, or most interdependence on project tasks, and (2) most overlap in the domain and mission claimed by each separate agency. These two points are obviously related, but different project overlap in roles or task responsibilities is at least partially related to the general competencies and goals of the separate agencies, although, some project responsibilities are being assigned by geographical location, i.e., LRDC has been designated to take the lead in site activities for IU-A, and RBS in IU-B. Overlap in domain and mission predetermine the project role overlap to some extent, but are obviously points of potential conflict that would have existed even in the absence of PSIP. (For example, it is likely that RBS and LRDC may both take on some field consultation projects of a similar nature, as might LRDC and RISE both be involved in knowledge consolidation activities.)

The formation of PSIP should be expected to have some secondary benefits for the Pennsylvania school environment because of the potential influence on reducing interorganizational conflict. PSIP brings together into a single project organization (the SAT), organizations what might otherwise be competing for delivery of similar services to schools. If the agencies continued to operate independently, one could expect greater overall domain and mission conflict, and probably less (or no) conflict among organizational roles within a single site activity. Therefore, PSIP reduces school-agency conflict by bringing related agencies into a single project with joint goals. Conflicts that prior

to PSIP appeared as domain contention between agencies begin to appear within the project as role overlap. Since there are few interorganizational conflict reduction strategies, PSIP should be able to improve services to schools by transforming this kind of conflict into intra-organizational conflict, for which there are available management strategies.

In terms of linkage, conflicts could appear between RBS and LRDC on research/analysis tasks, between LRDC and RISE on knowledge consolidation, and between RISE and RBS on implementation. In terms of time, these functional conflicts will obviously develop and be resolved at different points, depending on PSIP implementation at each site. It would be expected that RBS-LRDC problems would occur early in IU-A, during the needs assessment phase of the project. LRDC-RISE difficulties could occur at about the same time, but in relation to the knowledge consolidation phase of the project. If there are problems here, they are likely to be felt as RISE prepares to enter the selection phase of the project in an IU, or as RISE prepares to turn over the results of the selection process to RBS for implementation. On the other hand, to the extent that LRDC and RISE can agree upon a clear separation in knowledge consolidation duties, chances of conflict should be reduced. RBS-RISE problems could occur in the later parts of the activity in an IU, as selection activity lead by RISE moves into implementation activities to be conducted by RBS.

4. SAT relationships affecting work in IU-A

The SAT has worked remarkably well as a team but perhaps more effectively in terms of overall PSIP development than as a unified site consultation team. The members of each agency who performed site activities were relatively well organized in terms of their own presentations and site activities, but they had difficulty developing the ability to back each other up sufficiently during discussions with the LAT. More meeting time among SAT participants prior to site visits helped this situation, as did more preparation time and greater familiarity with other SAT activities. Reports of PSIP activities in other sites indicate that SAT presentations and guidance have been smoother, more integrated, and less time-consuming than the ones in the IU-A linkage case study site. This is probably a function of practice, modification of materials and procedures, and greater SAT familiarity.

Difficulties between RBS and LRDC occurred concerning measurement and analysis duties within the needs assessment phase of the project. While RBS had taken the major responsibility for needs assessment, this agency asked several times for the assistance of LRDC in developing measures of classroom processes and home environment variables that may affect the learning process in IU-A. These variables are identified in a theoretical model developed by LRDC. For several different reasons this collaboration between RBS and LRDC never developed in a timely manner, relative to the case study site. One reason was time. Organizing the project and providing introductory information to potential school sites took up a great deal of time. The lack of a project director

to monitor the early development also contributed to this problem. In the absence of such a director, RBS had no one to contact except the director of LRDC. While this approach had some influence on getting things done, it could have (but it didn't seem to in this situation) resulted in personally negative feelings that would affect future activities. Another contributing factor in this problem area was that one of the most involved LRDC persons in the proposal development had taken on other responsibilities and was not able to be involved in this early development effort. It is likely that had this person been involved there would have been less of a problem.

In contrast, there has been some evidence to date of difficulties between LRDC and RISE on the knowledge consolidation phase of the project. Knowledge consolidation appears to be a time consuming, difficult task, with special problems arising in ascertaining whether particular R & D outcomes are actually available. LRDC had concentrated on consolidation of research literature related to different learning processes and problems, while RISE had concentrated on information about particular products. This division of responsibility seemed to have worked relatively well, although there was concern on the part of RISE that there was not enough collaboration on researching topics that were germane to the efforts of both agencies.

In general, the present relationships seem effective. The SAT seems able to produce a closer, more integrated posture to other LAT's. Activities in IU-A, given the characteristics of the school site, have worked well. Perhaps the most critical oversight during the course of SAT activities occurred as the SAT was about to shift from needs assessment to selection. At that juncture, several questions from different

LAT members signaled that (1) the LAT had jumped the gun on program selection activities and (2) that not all LAT members bought, or yet understood, the entire PSIP process. There were indications that some teachers felt that the PSIP process applied only to the question of improving language arts skills for a low achievers group and that the SAT should be able to and would make a few quick recommendations on programs that would solve the problem. When this LAT expectation was not met, it threw the process into a state of dysfunction which was never really overcome.

It would be predicted that physical distance could be a big problem in this type of arrangement. With the agencies spread out at both ends of the state and working with a site that was not close to any of the agencies, physical distance problems seemed likely to occur. In this case, however, physical distance did not seem to be much of a problem. While it did have some effect on developing early working arrangements, this did not exist as a continuous factor. Once the SAT members began working in sites, they were together a great deal, anywhere between three and ten days per month. In addition, project staff meetings were held on about a quarterly basis. Telephone communications between SAT members was at a high level throughout the work with the LAT. Project agency reports and regular (weekly) communication between the project director and SAT members and the linker minimized any negative physical distance effects.

Within the interagency level, social distance was not a problem. All of the SAT members showed common experiences, had similar professional interests, and high motivation to work with local teacher groups. Within

the LAT, there seemed to be some social distance problems, particularly between the LAT coordinator and some of the other LAT members. The LAT coordinator felt somewhat pleased with her new role because it increased her social status. The IU linker had difficulty maintaining social identification with both groups. His prior experience in the district as a school board member made it hard for him to identify with or be identified by the LAT. Since the IU linker viewed the participation in the project as having potential for professional upward mobility, he tended to more closely identify socially with the SAT members. This was natural, especially since the linker spent a great deal of time working with the SAT beyond time spent with the LAT and SAT in joint meetings. The LAT observed the linker being more socially identified with the SAT which gave them reason for questioning his ability to serve as an advocate for the LAT. In addition, the LAT viewed the linker as socially aligned with the principal and superintendent which made them a little wary of how their actions might be reported to district administrators.

5. Mechanisms (and their effects) used to deal with forces affecting inter-agency linkage

a. Structure and specification

The structure and role specification of SAT agencies has been presented earlier in this case study. It was pointed out that such a structure, with PDE serving as the overall coordinating agency, provided for sort of a balance of power between agencies which, outside of this project, might be in a competitive posture for providing similar types of services to school districts. The structure, in effect, provided

for more than just a sum of the individual parts. Since PDE, through the project director, provided for arrangement of functions of overall planning, fiscal matters, communication to internal and external publics, and evaluation of project processes, the three other agencies were able to concentrate on developing and delivering the services needed at the local school level. These functions were not in existence at the start of the project and, as has been mentioned earlier in this case study, had a somewhat disruptive effect on agency coordination efforts in the start-up phase of the project.

The role of the evaluator was not very well specified. Very often the evaluator became the surrogate management representative because she was associated with PDE, and was thus expected to provide management functions in SAT-LAT meetings. Other management functions relating to the structure seemed to work well and provided the opportunity for agency personnel to spend most of their time in providing direct services to participating schools.

b. Formal communication system

The formal communication system set up by the project included project transaction logs, monthly agency reports, and weekly telephone conversations between the project director and agency IU linker persons. This communication system served the project well. Project management was aware of progress being made and problems within sites or between agencies in a timely manner and was asked to coordinate and facilitate communication between those involved. One of the major strengths of the project was the internal communications system. Once it became operational, about four months after the start of the project, it was able to minimize problems that would naturally occur as a result of physical distance between agencies.

c. Meetings

Meetings of project personnel occurred on a regular basis. About once every three months the project agency personnel and the IU linkers met for a two or three day session to review progress in the sites, prepare materials for use in the sites, and to plan or provide information to other interested parties such as other IU's, special interest groups, professional associations, and other PDE projects. The project took advantage of situations where several project professionals were in attendance such as at AERA, PERA, and statewide conferences to get together to work on project concerns.

In addition to these meetings, SAT members almost always worked together the day or evening before a LAT-SAT session.

d. Presentations

Project staff made several presentations to internal and external groups. Presentations were made to groups within the participating agencies, especially those within PDE. Papers were presented at AERA conferences, at the Pennsylvania Educational Research Association annual meeting, and at the Pennsylvania ASCD conference. Information on the project was presented at special group meetings and curriculum conferences in Pennsylvania. The communication made beyond the project boundaries was a priority of the project director. Word of the project was very well disseminated within Pennsylvania and to some extent to groups outside of Pennsylvania.

e. Communications with NIE

There was a strong commitment to providing information and service to NIE. Personnel at NIE have indicated that they were well informed

about the project. There were some problems in communication to the project from NIE but those were in areas that affected all seven RDU projects and not specifically relating to PSIP. The project director and evaluator provided other valuable services to NIE through participation in dissemination conferences and proposal review activities.

B. Linker level

This section discusses barriers to linker effectiveness in terms of the linker's role and conditions within the case study site that affected linker effectiveness.

1. Forces affecting linker effectiveness, context of host agency

a. Marginality

Marginality refers to the status of the linker in the host agency in terms of both status prior to or in absence of project involvement and status during project involvement. Prior to involvement in the project, the IU linker had been a curriculum specialist for the IU. This position was a fully-budgeted regular IU position. Status in the IU was seen as stable and continuing. There seemed to be no marginality problem for this linker. Involvement in the project increased the potential for a marginality problem. While the linker's supervisor was very supportive of the project and the work of the linker, the linker has been placed in a more marginal status with the host agency. Two factors have contributed to this problem. The high probability of no project funding after June 1979 and personal interests of the linker to receive a doctorate and perhaps move into another type of position have made the future of the IU linker as an IU staff person somewhat tenuous.

b. Role strain

This has been a problem for the IU linker. When the role of the linker was more in the domain of organizing entry and LAT-SAT meeting logistics and serving as a sort of "master of ceremonies" in the LAT-SAT meetings, while the SAT provided the technical assistance and project process direction, these seemed to be little role strain. Much of the work of the linker in the case study site tended to be as a ombudsman. Early in the project the linker was effective in this role, but as the LAT individual feelings tended to fragment the group, there was little the linker could do to get the LAT back into working as a group. Since the linker was working with several other sites (five others during the first year and up to ten the second year) and spending a great deal of time working with the SAT personnel, the linker was not able to devote the time required to work with an LAT that tended to take directions that were not congruent with decisions that had been made in the LAT-SAT meetings.

The nitty-gritty organizational work required of the IU linker took up a great deal of time. This, combined with a lack of technical expertise, put the linker in an uncomfortable position. The SAT members, in doing the technical work and feeling this was their role, did not recognize that the linker's effectiveness was hampered. The linker was not very vocal in presenting this concern to the SAT. As the LAT began to work less as a group, the SAT methods of getting the group back on task became less effective and the linker was

placed in a role that had not been required to any extent previously. In the last meeting of the LAT-SAT, the ability of the SAT to get the LAT back on task was pretty much gone. At that point, the linker was completely frustrated and unable to deal with either the LAT or SAT. Role strain for the linker was at its peak and the linker was blaming himself for the breakdown and the SAT was in a position of trying to reduce the linker's anxiety.

Had the linker been more involved in the work with the LAT when they worked on their own and had he been more of a technical advisor to the LAT, the problem would have probably not been prevented but perhaps it would have been recognized much earlier and either dealt with or used to make a determination that the LAT was probably not going to complete the process and thus mechanisms for withdrawal could have been initiated.

c. Role novelty

The IU linker saw participation in the project as providing for role novelty in a positive sense. He was "turned on" to the opportunity of working with the people from the SAT agencies. This novelty was a positive force for the linker. Other novel aspects of the project such as the purpose and concentrated work with local school groups were seen as positive aspects of involvement.

However, the linker was not experienced in providing such concentrated, ongoing assistance to a local teacher group. Had the linker been working with one or two school groups, this novel aspect could have been dealt with fairly easily. However, since there were several of these groups working at different points in the process,

this novel aspect of the project prevented the linker from adequately dealing with the case study LAT.

d. Non-routine tasks

This was a problem, but not in a sense that might be expected. It might be expected that non-routine tasks would be a barrier to linker effectiveness. To some extent, the non-routine activities demanded of a linker at the point where the LAT decided to drop out of the process created an ambiguous situation for the linker. This, perhaps, could have been avoided had the linker been involved in more "non-routine" tasks earlier in the project. Almost exclusively, the linker's role was as a communicator of information between the LAT and SAT. In the case study site, the linker was usually not an influential party in the decisions of either the LAT, SAT, or combined groups. More meaningful tasks, ones that would broaden the experience and skills of the linker, would have provided for a more effective link between the two groups. Opportunities which could provide such experience for the linker did not seem to materialize with this site. They have been more apparent in some of the other sites. The need for the SAT to maintain control was more related to the fact that this was the "first" site than any planned exclusion of the linker. Relative to this site, there seemed to be little growth on the part of the linker. While the linker enjoyed the involvement with the SAT members and the SAT members held the linker in high regard, there did not seem to be enough responsibility placed on the linker to promote linker development to the extent that the linker could

operationalize the process in other sites without concentrated technical assistance. The linker could have handled and would have liked to have had more involvement in the non-routine tasks.

2. Mechanisms used to deal with these forces

Relative to this site, there were few effective mechanisms used to deal with these forces affecting linker effectiveness. An assumption was made early in the project that precluded much effort in this area. Since the linker was well known in the school district, was well established in the IU host agency, and was very personable, there was little perceived need for training the linker. Of course since the project was not sure if its own procedures at the beginning of the project, specifications for providing linker training were not well defined. There was a feeling that the linker would "learn" as the project developed. However, since the linker's role was different than that of the SAT personnel, there were certain aspects of linker training that were overlooked. Among them, were the areas of: teacher group dynamics, group problem solving, group consensus strategies, analysis and presentation of needs assessment/program description data, and conflict resolution. The project realized more of a need for linker training because of events in the second IU. A linker training session was conducted during the Winter of 1978, but this was too late to have had any effect on the case study site.

3. Forces affecting linker effectiveness, context of local school situation

Miles (1) and Sieber (2), in separate presentations, have discussed aspects, which working independently or in coordination, tend to relate to the degree to which a school system's environment is supportive of innovation or change.

These conditions are examined in this section relative to how they related to the development of a working relationship between the linker/SAT members and the LAT in the case study site. Aspects discussed in this section are:

- . Goal ambiguity
- . Input variability
- . Role performance visibility
- . Low interdependence
- . Vulnerability
- . Lay-professional control
- . Low technological investment
- . Quasi-professionalism

Some of these aspects are more directly influenced by project participation than others. Those that can be influenced must be recognized by the SAT and dealt with directly by the linker and SAT. Others that are less able to be influenced have to be recognized and accounted for in the interpretation of project outcomes.

a. Goal ambiguity refers to the lack of clearly stated goals and/or objectives. Related to this issue are the problems of needs identification and definition. Informal initial discussions with teachers regarding problems usually result in problem descriptions that are vague, tempered by immediate concerns, and lacking in terms of group consensus. Assisting an LAT in determination of needs, goals, and objectives requires guidance and technical support. Originally, it seemed that the LAT had defined the problem to be addressed. At least, they had prepared a general needs statement. However, as the LAT got more into the selection process, it was obvious that the group did not have consensus on the prioritization of problems or goals. Not only was it realized that there was a lack of consensus on goals relating to the project selection process, but there

was a lack of understood goals for the ongoing language arts program and, to some extent, a lack of goals for the entire middle school program. While the LAT and SAT had assumed that the language arts curriculum was described in a document prepared a few years before, when the LAT looked for the document it was no where to be found.

Goal ambiguity existed at the start of the project. However, it seemed that this ambiguity was being reduced through participation in the project. What was more likely the case is that the LAT got involved in the project process and the overall language arts goals were no longer pervasive and became of concern again only when the LAT was faced with selecting an R & D outcome relating to project goals which could not be related to overall language arts goals. When it was found that there were no documented nor group agreed upon program goals, the LAT began to rely on personal interests. This reliance on personal interests rather than group goals precluded any progress on selecting an R & D product.

An attempt by the SAT to provide summary of problem areas and needs through using "one-liners" or SAT produced brief statements may have moved the process ahead, but did not seem to facilitate group ownership or consensus.

The problem of goal ambiguity which was never really resolved is probably the single most influential barrier to the completion of the PSIP process. Since this was the first project site, the SAT apparently did not realize the degree to which the LAT did not have consensus on goals or what effect such lack of consensus would have on project outcomes. Lack of ownership of a common set of interests, program goals, and project goals made it very unlikely that any innovation or changes would ever take place in this school environment.

The LAT was somewhat afraid to admit that they did not agree on common goals, especially to a group of outsiders, until late in the project. While the SAT feels they tried to tell the LAT that overall language arts program goals were not apparent, they still put the LAT through the process. By doing this, the LAT seemed to have the perception that the SAT somehow understood their situation and would be able to work with them regardless of the state of their program.

b. Input variability refers to the wide variety of input from the environment. One such input is information regarding educational R & D outcomes. Once needs are identified, it is often difficult for teachers to locate and evaluate possible R & D outcomes that can be used for the solution of local problems. Constraints such as costs, time, needs for inservice, and special equipment must be considered. Reduction of this type of input variability in the PSIP is a function of the LAT - IU Linker link and the LAT - SAT link, especially the role of RISE in the SAT. A critical secondary link in this area is the link between the LAT and the district and school administrators. RISE had identified several possible R & D outcomes which were being considered by the LAT for solution of the problems identified in the needs assessment and program description phases. These possibilities were selected by RISE, from the wide variety of their own information sources, specifically for this site. Such a reduction in outcomes to consider seemed to save time and had increased the interest and commitment of the LAT to continue into the implementation phase.

The possibility of selecting an R & D outcome that would help was a motivation that kept the LAT involved. When it became apparent that the LAT was interested in several different R & D products and that products which were selected would probably need to be adapted to the local situation, the LAT seemed to loose interest in continuing project activities.

c. Role performance invisibility refers to the situation where role performance is relatively invisible between colleagues and between teachers and administrators. It can also refer to, in terms of the PSIP, the lack of accurately perceived roles and responsibilities of SAT members and the IU Linker on the part of the LAT. In addition, there is a possibility of discrepancy between expected and actual role performance at all levels and positions of the project.

In the local school situation, role performance invisibility was somewhat reduced for the LAT. Other local teachers were made aware of the project and some information was provided to the local community through the newspaper. Visibility increased from the perspective of the administration.

While it could be expected that role performance visibility would be a positive aspect of promoting change, this seems to be the case only when teachers are confident in their own roles. Some teachers are threatened by having roles made more visible. This seemed to be the case in this local site relative to the teacher who was a disruptive influence on the LAT. Many of the SAT members felt the reason for the behavior of this LAT member was that he was threatened by the possibility that others would find out what was happening in his classroom.

Role performance visibility increase would seem to be a positive factor only with a teacher group that had good internal working relationships and confidence in its position in the school district. Increasing positive aspects of role performance visibility would seem easier with either an already formed group with strong internal support for each other or a newly formed group of teachers who have high levels of self confidence than with an already established group with loose internal ties and fragmented interests. This observation seems to have implication for constructing new groups using volunteers or purposely selected individuals with strong personal and professional confidence.

One role of the linker should be to facilitate the self confidence development of a group. In this situation, the linker was not able to do this to any extent probably because of his prior role in the district, his friendly association with district administrators, and because of some personal lack of self confidence of some of the LAT members.

d. Low interdependence refers to lack of functional relationships among different system components. Lack of interdependence typically occurs on several levels. There is usually lack of interdependence among teachers. Often, teachers tend to be isolated both physically and professionally from one another. In addition, there is often low interdependence between teachers and administrators. On a broad scale, there is typically low interdependence between teachers or outcome potential users and outcome developers.

The PSIP experience in the case study site seemed to have had some influence on teacher group interdependence. Prior to PSIP, the teacher group was a loose confederation with few teachers working together on

issues that faced the entire language arts department. Through the PSIP activities, the LAT seemed to become more of a group working together toward solution of common problems. Although there was some progress in this area, there continued to be problem in terms of differential group commitment on the part of one teacher who was openly skeptical and generally disruptive and on the part of two other teachers who were not generally disruptive, but are pessimistic about PSIP processes and objectives. The SAT and the IU linker attempted various approaches in dealing with this problem including private discussions with the individuals, increased flexibility, and general group discussions related to obtaining group consensus and commitment. In the case of the single disruptive teacher, it seemed that the problem was not unique to the activities and linkage relationships of PSIP, but more a general attitude specific to this individual. This problem tended to be the single, most critical one faced by the PSIP in this site. It is one that was not solved through the linkage structures, and reduced the effectiveness of the program in terms of the group decision-making, commitment, and selection of R & D outcomes. It seemed that the greater the time involvement between SAT - IU linker and the LAT, the more the activities were subject to disruption due to the individual personal problems beyond the control or influences of SAT - IU linker personnel.

PSIP had the potential of increasing interdependence between R & D outcome developers and users. The interaction between the LAT, and the IU linker, and the SAT in the case study site resulted in the LAT becoming more aware of systematic methods of determining needs and utilization of R & D outcomes. The SAT had some success in getting the LAT to see the

need for adaption of R & D outcomes to meet local needs and conditions. There were a few problems associated with this situation.

The SAT had attempted to be as flexible as possible in dealing with LAT activities and interests. However, this flexibility seems to have decreased interdependence. In several situations the SAT-LAT working sessions seemed to have resulted in decisions and plans for further actions on the part of the LAT, but when the SAT met with the LAT the next time, it seemed that the LAT had taken things in a different, unexpected direction. The SAT considered reducing some of the flexibility and providing more direction for the LAT activities, but the change in SAT approach was not accepted by the LAT and contributed to the decline in cooperative efforts. The SAT probably should have been a little more directive with the LAT or at least more consistent in how the process was conducted.

3. Vulnerability refers to problems of boundary maintenance. In the use of the R & D outcomes, teachers tend to be threatened by the type of people who serve on the SAT. Initially they appear skeptical and somewhat defensive. The SAT can make progress only if they are able to reduce defensiveness and develop trust and openness.

In the PSIP situation, the IU linker was able to reduce skepticism and defensiveness, through his personal acquaintance with district administrators and teachers, so that SAT members were able to demonstrate: their ability to understand the local conditions, their interest in getting involved, their knowledge and access to resources that could help, and their generally pleasant nature. The IU linker did not promise the world or make any great claims about solving any and all problems facing the LAT, but instead indicated that the SAT was a group that had in-hand or

access to R & D skills and products that had been shown to be effective in helping local schools deal with problems in the basic skills area. Through the preparation work of the IU linker, the SAT was given a chance in an atmosphere of somewhat less anxiety and with less threat involved. Vulnerability efforts of the LAT by the SAT were adequately minimized.

However, the LAT felt vulnerability from two other groups. One group was the district administration or the superintendent and especially the principal. The LAT did not seem to know where they stood with the administration. Although the principal attended some of the LAT-SAT sessions, he was not an active participant and the LAT did not have a sense of meaningful support. The acknowledgement that "he did not get in our way" was not viewed by the LAT as support. The LAT felt a sense of vulnerability from other teachers, in particular teachers in grades and schools that fed students with the middle school. In fact, the interest in one of the R & D outcomes, the management system, was seen as a direct solution to the problem of lack of adequate information on entering students from the feeder schools.

Relationships between the school and community were not pervasive and did not seem to affect or be affected by participation in the project.

f. Lay-Professional control problems relate to possible conflict between the school board and the administration/teachers. In the case study site, the IU linker was known by board members and administrators, and through support built up prior to PSIP was able to gain board and administrator support and willingness to participate in the PSIP. An IU linker not known by upper level decision makers would first of all have to gain such respect and rapport in order to facilitate the involvement

of a local school site in such a long-term effort. However, there is potential for problem in such a situation. By being known previously, there are certain role expectations of the linker. To the extent that these role expectations are not met or actual role performance is different, there is higher probability of misunderstanding and communication that is biased by personal relationships.

g. Low technological investment characterizes most educational systems. It is difficult for teachers to keep up with technically based processes and outcomes. The major thrust of the PSIP was to develop, through the IU linker, the capacity to use technical procedures and products in the solution of local school problems. Installation of systematic processes for needs assessment, program description, R & D strategy or outcome selection, and evaluation were the primary aims. The complete process was viewed as more important than the actual R & D outcome selected. It was viewed as the only generalizable aspect of the program. PSIP increased the technological investment through the SAT providing the guidance and training and the IU linker providing communication between the SAT and the LAT. The technological assistance provided to the LAT through personal resources of the SAT agencies, was massive. However, the LAT was not able to realize the high potential of this assistance because of problems that have been described in the areas of goal ambiguity, low interdependence, and vulnerability.

h. Quasi-professionalism refers to the self-image of educational groups. There is a tendency for teachers to be somewhat unsure of their status and how they are viewed by others. Sieber (2, 128) points out that "quasi-

professionalism produces status-insecurity." Consequences of quasi-professionalism seemed to be present in this case study site and did affect the project in predictable ways. Seeking an R & D outcome which would be used with the total group of teachers was resisted by the LAT on several occasions. This group seemed threatened by the possibility that the choice of such an R & D outcome would force them to work more closely and thus restrict what Sieber refers to as "professional autonomy."

There is a tendency for overcompliance or "ritualism" to occur where the group gets wrapped up in means to the neglect of ends. This was obvious in this situation. During the separate phases of the project progress seemed to be being made, but at transition points, where the LAT was required to reassess goals, the more personal, skeptical attitudes and behaviors of the LAT dominated the atmosphere and the group easily got off task.

Another aspect of quasi-professionalism which was observed in this site was the tendency to avoid informal communication on project matters. While there was some informal communication, it tended to be between pairs of teachers and not between total group members, and that informal communication tended to reinforce independent teacher interests and perceived needs rather than those of the total group.

To some extent, another consequence of quasi-professionalism was apparent even at the LAT and linker levels. Energies tend to be channeled into status enhancement activities rather than into innovation activities. The LAT coordinator tended to view participation as enhancing her status. What the SAT perceived as a turn-around in the attitude of the LAT

coordinator to be more positive about project activities, I suspect was more of a realization of status enhancement possibilities of the coordinator. The pressure or encouragement of the LAT coordinator to continue in the process seemed to be more motivated by a need to maintain a new status role than successful selection and implementation of an R & D outcome. At the linker level, the IU linker was well aware of a higher status position gained through concentrated involvement with the project agency personnel. While this status position did not seem to negatively affect the linkers methods of working with the LAT, the LAT may not have been as receptive to the linker's efforts as they might have been had they not perceived the linker in a higher status position than he had held previously.

C. Capacity Building

It is questionable at this point whether the primary goal of PSIP is solving particular problems in selected school sites or imparting to a variety of IU's, and subsequently local schools, the capacity to deal more effectively with problems in the future. This is, of course, not an either/or choice. The extent to which the problem solving skills imparted during PSIP will be internalized or institutionalized in schools and IU's is heavily dependent upon the successful implementation of the outcomes selected in each school site. Nevertheless, the choice between simple program completion and transferability of skills is a fundamental one that will determine the ultimate impact of PSIP in any particular site.

If the SAT is successful in imparting to local educational organizations the ability to solve their own future problems, it must recognize when to be more directive than facilitative. If the LAT is at any

point able to identify or attribute a problem diagnosis or outcome selection as belonging to the SAT rather than itself, it is unlikely that capacity building will take place. The LAT must have a sense of ownership over what takes place, both successes and failures. This sense of ownership is a difficult one to facilitate in any change effort because the local group is usually very willing to become dependent upon the change agents as a means of avoiding responsibility for failure. There are times when the SAT must be directive, but these must be in areas of process mechanics rather than local programming decisions.

This concern among the LAT was very evident in April in two ways. One member of the LAT pointed out that a new factory was being established in the local community and that the anticipated influx of new students might change "the entire school situation in two years," thus "why was it worthwhile to do anything now if problems were going to change soon, and programs initiated now may be unapplicable then." Another LAT member asked what would happen next year if the outcome they selected for implementation did not seem to be effective. Where would the SAT team be then? Would they come back and help again?

While these kinds of questions might have been anticipated, they caught the SAT members somewhat by surprise. The answer seemed appropriate -- that the PSIP process should enable the local school to meet its future problems on its own. But the uncertainty on both sides demonstrated more confusion perhaps in how PSIP objectives had been presented and/or interpreted in the first place. To the extent that local capacity building is important, every sign of dependence by the local group upon the outsiders

should be taken on directly and investigated for its implications concerning functioning in that particular case.

In a broader sense, how does PSIP related capacity building develop which is responsive to needs of local school districts throughout the state? In order to develop the capacity of local school districts to deal with problems using a systematic process, several things must happen. Training a person at the IU level who could provide guidance and technical assistance, as well as a link to needed information sources is a critical need. How would such a person be trained? What characteristics, both personal attributes and technical skills, should such a person possess? What competencies relate to being able to function well in such a setting? Who is responsible for providing such training? What mechanisms must be set up to support such a person in dealing with local problems? What is the role of teachers training institutions in preparing teachers to be responsive to such efforts? How can teachers be provided with inservice programs that facilitate such efforts? In other words, how does such an effort continue after NIE funding has been phased out?

V. Implications/Recommendations

A. Policy

Policy implications seem to fall into two categories: as related to this project and as related to generalized change strategies. It is difficult to deal with policy issues which arise from a large scale funded project such as this and then infer policy issues relative to a setting that does not have the provision of such high level outside - in resources of personnel, time, and funding.

1. Project specific

a. NIE - Project

One problem the project had was in dealing with ambiguity of NIE personnel roles in the project. This became a problem when the project was dealing with the linker situation in the second IU site. A more serious problem was evident when there were questions of future fundings of project activities. There was often the feeling that NIE was not very responsive to the project. The project had sent very detailed reports to NIE and expected some feedback which they either did not get or did not get in a timely or thorough manner. These problems were somewhat typical of large, multi-year federally funded projects and are not easily solved. However, NIE should be aware of these and other potential problems which can influence project operations.

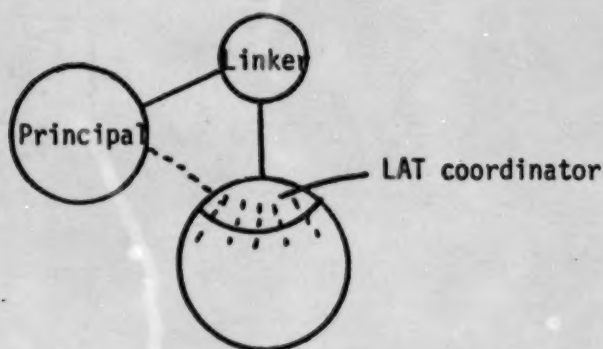
Another problem, which should have been prevented, was the ambiguity caused by changing overall project evaluation methods and prime contractors. Many of the original project evaluation methods were dropped, creating strain on the project evaluator and agency personnel.

As if this wasn't enough of a problem, there was a change in prime contractors in the middle of the project. The change in methods and contractors not only created problems for the project evaluator but for project external evaluators as well. Original contract agreements for substance, delivery, and use of products had to be changed.

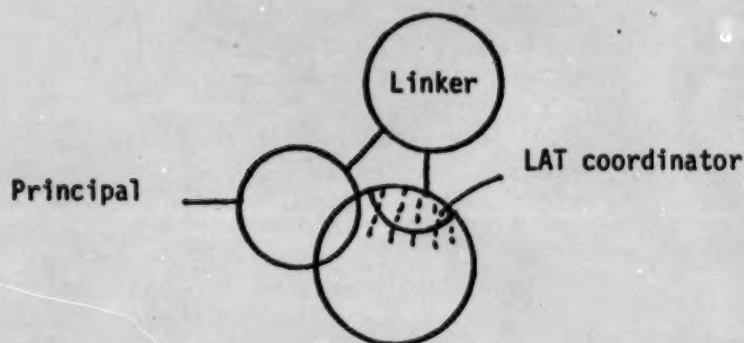
While certain of these types of problems are natural - this type of effort, great care should be exercised to minimize their disruptive efforts.

b. Project - Site

Several policy implications are apparent in the relationship between the project SAT and the site. The teacher-administrative relationship has an effect on the development of project-site linkage. This relationship becomes even more critical if there is any weakness in the internal relationships between the group leader or coordinator and the group members. The situation in the case study site could be diagrammed as follows:



There were no strong internal linkages between the LAT coordinator and LAT members. There was a weak link between the principal and the LAT. In this situation, problems may have been minimized had the principal been more of a participant in the LAT. Such as:



While the principal may not have necessarily been a member of LAT, greater observable participation would probably have resulted in either more focused LAT direction or an earlier recognition, on the part of the SAT, that working with this group using the PSIP approach would probably not be fruitful. Therefore, policies should be developed which would require greater teacher-administration interchange whether that interchange be beneficial or disruptive. If it is found to be disruptive, then it can be recognized early that the local environment is not one that would support educational innovation. A strong internal linker with a high level of teacher support and confidence would perhaps support a change effort even though administration support was not strong, but still not counter-productive. In effect, forcing the issue of teacher-administration cooperation could provide for more efficient use of linker resources relative to needs of other local sites.

Another project-site issue which has implication for policy matters is the sort of "fish-bowl" environment which characterized the situation in this site. One aspect of this problem was that often there were as many "experts" as teachers in meetings. In addition, there were other observers, such as evaluators, in attendance on several occasions. Policies should be developed by the project to limit the number of persons in the meetings. As the SAT became more experienced, there were fewer SAT members in attendance in other site LAT-SAT sessions. The research focus of the project required the attendance of several observers. Any similar project should be aware of effects of outside observers and should use a great deal of discretion in allowing their presence in continuing project activities.

As was pointed out earlier, there is need for policy guidelines regarding project involvement beyond the point of active participation in intended project activities. When the case study site LAT decided to pursue activities that were no longer directly related to search and selection of R & D outcomes, yet remained desirous of SAT assistance, the SAT was unable to respond to those request since it had not faced this situation before. This is not to say that the SAT should or should not have continued providing assistance, but that the SAT should have been able to answer the request and provide a rationale for the decision.

Policies need to be developed regarding the level and provision of technical assistance required in the use of the project process materials. While it was the intent of the project to develop a set of

process modules which a linker could use in the absence of concentrated SAT involvement, there was little thought given to how linkers should be selected, what their characteristics and skills would need to be, how linkers would need to be trained in the use of the materials, and what agency support would be available, how it would be organized, and supported financially. This is a policy issue which must be addressed prior to the use of these materials during times of limited or no project external fiscal support.

c. Linker level

One implication which relates to the policy issue is in the selection of a linker to work with a local site. Sometimes there is no choice of who will be a linker. When there is a choice, serious consideration should be given not only to the personal characteristics and skills of the linker, but to the history of a linker's relationship with the local site. When the linker has had no historical relationship with the site, it is easier to develop and identify the role of the linker than when the linker has had a prior history with the site, especially if that history influences the degree to which the linker's role can be defined and accepted, with minimal threat. Where possible, it is recommended that the linker either be new to the situation or a person who has served in a role consistent with the linking function and there is a perception on the part of local personnel that linker status has not been appreciably enhanced by the new role. If a linker has a prior history with a site and that history includes the performance of other roles, it will be necessary to prepare the local group for receiving and permitting the linker to establish a new role with minimal threat. However, in general, it seems that it would be advisable to avoid this potential problem area if at all possible.

2. Linking projects, general policy implications

While much of the previous discussion is specific to this project, some generalizations may be possible for other linking type projects.

General policy needs are recommended as follows:

- a. Overall project or activity sponsors should have policies regarding supervisory or monitoring personnel roles and methods of handling project personnel issues.
- b. Project or activity sponsors should, to the extent possible, communicate funding and project continuation criteria to project management.
- c. Guidelines and policies for use in project evaluation should be developed prior to project start-up, should be applied consistently throughout project operation, and should be modified only when improved evaluation methods are determined not to be extremely disruptive to project activities.
- d. Policies should be developed, to provide guidance in the selection of sites, regarding necessary pre-conditions of teacher-administrative relationships and group inner-relationships.
- e. Policies should be developed regarding the presence of outside observers and evaluators, and to some extent, the number of project "experts."
- f. Policies should be developed to guide the work of the linker and project technical advisors when the local teacher group moves out of the routine process or drops out of active participation, but still requests assistance.
- g. Policies regarding the matching of a linker to local conditions should be developed. The linker should probably not be a person with former ties to a situation that would lead to problems in role definition or a person with friendly associations with district administrators.

B. Management

With such a complex set of agencies and personnel associated with this project, there was high potential for management problems. PDE, the overall management agency, RBS, and LRDC are multiple-mission agencies.

RISE is the only agency which has a fairly well-defined, singular mission. Agencies with multiple-missions tend to be more subject to providing personnel with different personal and professional motivations and individuals who receive varying rewards for participation. In addition, multiple-mission agencies may have internal influences which affect personnel continuity and ability to provide concentrated assistance.

There were some problems of organization and cooperation at the start of the project. They were worked out with moderate satisfaction by the agency personnel prior to appointment of the project director. The only major personnel change occurred in RBS project assignments. This transition was made with no disruption to the project activities.

The project staff and director are to be complemented for maintaining a high level of professional cooperation throughout the project. It was obvious that, even though there were some disagreements in approach, agency personnel maintained high personal and professional relationships. In addition, interest in project activities and involvement with local sites remained high throughout the project.

Since only four out of ten active agency personnel were involved in developing the original proposal, there was potential for an "ownership" problem. However, this did not occur because the active project participants had to develop methods and materials for use with the sites and ownership was achieved through that concentrated work. Agency personnel were able to personalize their involvement. This implies that persons not involved in project design need to have an opportunity to develop membership through participation and decision-making on a continuous basis.

Management and programming roles were well defined in the project. The project director facilitated interorganizational working relationships, dissemination of resources through contractual agreements, contacts with other interested parties, and project communications with NIE. The project director was sensitive to the interests and skills of the agency personnel and did not unduly attempt to influence the programming decisions of the agency personnel. The implication is that a project director working with such a large group of experienced professionals has to maintain a facilitative, communicative role and be careful not to dominate programming decision-making.

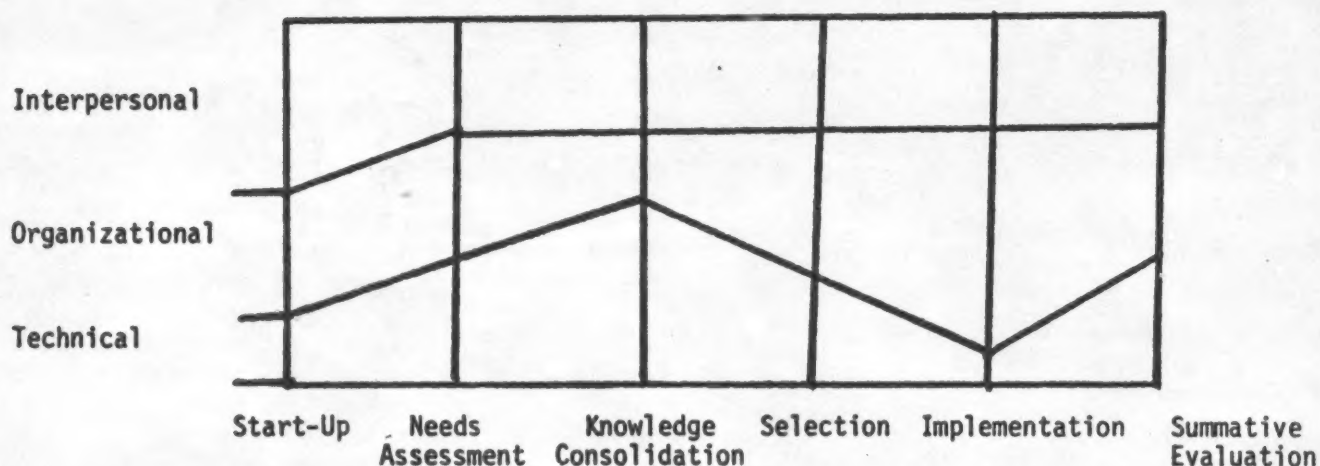
One situation with implication for management relates to the role of the evaluator. The project evaluator was a PDE staff member assigned to the project. Since the evaluator's host agency was PDE, the same agency providing project management, there was a strong tendency for agency personnel, the linker, and site personnel to confuse the role of the evaluator as being "assistant project director." In addition, the evaluator became a content area specialist in dealings with the LAT. The combination of these two factors lead to role confusion on the part of the evaluator. At times the evaluator had difficulty maintaining objectivity. Management and agency personnel need to be aware of the evaluator's role and make every effort to not involve the evaluator in activities that could reduce the evaluator's objectivity.

C. Research

Several research issues have surfaced as a result of the development of this case study. In section III, implications for types of organizational structures on linkage arrangements were discussed. This is an area of

needed research. Similarly, different change strategy settings, such as developmental, restorative, innovative, or utopian, may have implications for the nature of linkage structures and the particular skills in the IU type linker.

Research needs to be conducted on the balance of technical, organizational and interpersonal efforts needed by a O.D. change agent and how such balance is affected by the type of change setting and time frame of the effort. For example, one hypothesis would be that interpersonal effort needs to be higher at the start of the change process than in later stages, but remain relatively high throughout. Organizational efforts should be very high in initial and later phases. Technical efforts would increase in various phases. Such a situation might look like this:



With the local teacher group in this case study site, major problems seemed to surface at the transition points between major project phases. There is a need for greater research on how feelings of autonomy and cooperation are different during transition phases than within phases.

Also, strategies for dealing with attitudes and expectations during the transition phases should be sought and tried.

More research needs to be done on the efforts of the interrelationships of local teacher groups on change strategies. It is pretty much accepted that a group with strong professional relationships is more likely to succeed in a change effort. When this condition does not exist, are there strategies for facilitating this condition or working with it? Similar to this issue, is the issue of the degree to which teacher personal, rather than professional, relationships affect the development of a working group.

This study has also pointed up a need for more attention to matching a linker to a teacher group or, at least, accounting for and addressing the potential for effects of prior history of the linker in the site.

In this case study site, there were secondary side effects of the evaluation methods and personnel, including the NIE external consultants. Finding more unobtrusive methods of evaluation in the study of change strategies will be difficult, but needed. We need more objective and quantitative methods of studying linkage arrangements. While the case study approach provides for a holistic view, there are areas which need more concentrated attention, especially in the study of group interactions and decision-making.

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2. Sieber, S. D. "Organizational Influences in Innovative Roles," In Eidell, J. and Kitchell, J. (Eds.), Knowledge Production and Utilization, CASEA, 1968.

APPENDIX: Methodology

The linkage case study writer was contracted by the Pennsylvania Department of Education for the purpose of developing linkage case studies in one site of each of two intermediate units. He had worked with the Pennsylvania Department of Education on several projects prior to this effort, but not specifically for development of case studies. His present position is as Assistant Professor of Educational Research and Evaluation at the University of Virginia, Charlottesville, Virginia 22903. Work performed was based on an agreement between the Department of Education and the linkage case study writer acting as an independent consultant.

A. Methods Used

Primary data collection methods used to develop this linkage case study were: review of project documents (including project staff meeting notes, site meeting notes, project RDUP reports, project evaluation reports, project staff memos, the site case study report, and project training materials), observations of project staff meetings and LAT-SAT meetings, and interviews with project staff, NIE personnel, LAT members, the site principal, and directors of SAT agencies.

B. Data Collection

The linkage case study writer was sent project documents on a regular basis by the project evaluator and the IU linker. He attended several project staff meetings and several LAT-SAT sessions. Unfortunately, the linkage case study contract was not approved until January 1977, thus the linkage case study writer was not available to directly observe project organization efforts or the first four or five meetings held with the case study site.

C. Reactivity

As nearly as the linkage case study writer can determine, he had no reactivity influence on project staff or the IU personnel. However, as has been mentioned before, external evaluators viewing the LAT-SAT meetings had some effect on creating a somewhat unnatural situation. The extent to which the linkage

case study writer contributed to this is hard to access, but was probably slight, since he attended several meetings and the LAT seemed to become accustomed to his presence.

D. Confidence in Conclusions

The linkage case study writer feels very confident in his conclusions. Involvement with the project for almost a year while working with this site has led to a feeling of confidence that he has observed and comprehended the primary project happenings and personal feelings of the project staff and participating teachers.

October 9, 1978

VITA

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1. Education:

<u>School</u>	<u>Date</u>	<u>Degree</u>	<u>Specialization</u>
Miami University, Ohio	1961-62	--	---
The Ohio State University	1962-66	B.S. in Educ.	Chemistry
The Ohio State University	1966-68	M.A.	Higher Education
The Ohio State University	1968-72	Ph.D.	Educational Research & Development, Sta- tistics, Evaluation

2. Teaching Experience:

- a. The Ohio State University, 1970-1973
Introductory Research Methods in Education
Introductory Statistical Methods in Education
Intermediate Statistics in Education
Educational Evaluation
- b. The Pennsylvania State University, 1973-1978, Assistant Professor of
Educational Psychology
Introductory Statistical Methods in Education
Inferential Statistics in Education
Educational Evaluation
Systems Theory in Education
- c. Western Michigan University, Summer 1978, Jefferson County, Colorado
Introductory Statistical Methods in Education
- d. The University of Virginia
Current Ideas in Program Evaluation

3. Administrative Experience:

- a. The Ohio State University
1967-1969 Director, Drackett Tower, 870 man residence hall
1969-1970 Director, Scholarships and Grants programs
1970-1972 Assistant to the Dean, College of Engineering
1972-1973 Director of Training, Model Training Project,
Evaluation Center (training educational evaluators)

b. The Pennsylvania State University

- 1973-1974 Assistant Director, Center for Cooperative Research with schools (CRWS)
- 1974-1975 Acting Director, CRWS
- 1975-1977 Director, CRWS
- 1977-1978 Associate Director, Center for Educational Research and Evaluation

4. Research Experience:

a. Funded Projects (as coordinator or director):

- (1) Two-Round Delphi Survey to Predict Trends in Special Education, Council for Exceptional Children, Funded by BEH-USOE, 1973.
- (2) The Status of Management Information Systems in State Departments of Education, Case Studies, Alabama State Department of Education, 1973.
- (3) Evaluation of the Pa. Right to Read Effort, Pa. Dept. of Education, 1974-1976.
- (4) Evaluation of ESAA Project, Harrisburg City School District, Harrisburg, Pa. 1974.
- (5) The Development of Pupil-Personnel Reporting System for Special Education, Intermediate Unit 10, Philipsburg, Pa., 1974-1975.
- (6) Evaluation of the Educational Program, Loysville Youth Development Center, Loysville, Pa., 1975.
- (7) Evaluation of the Educational Program, Waynesburg Youth Development Center, Waynesburg, Pa., 1975.
- (8) Third Round of CEC Delphi Survey to Predict Trends in Special Education, Council for Exceptional Children, BEH-USOE, 1975.
- (9) Evaluation of The Pennsylvania State University Developmental Year Project, P.S.U., 1975.
- (10) External Audit of the Evaluation of the Alternative Secondary School, State College, Pa. School District, 1976.
- (11) The Design and Development of a Competency Based Adult Basic Education Curriculum Relating to the APL Health Objectives, Pa. Dept. of Education, 1976-1977, 1977-1978.
- (12) Evaluation of the Television Reading Program of Capital Cities Communications, Inc., Philadelphia, Pa., 1977-78.
- (13) NSF Phase I grant for the Evaluation of NSF CAUSE Projects, 1977.

b. Other Funded Research (as project evaluation specialist)

- (1) Bilingual Education Project, Lancaster, Pa., USOE, 1974-75.
- (2) Evaluation of Special Education Training Program, P.S.U., USOE, 1974-1975.

- (3) Nutrition Curriculum Development Project, Nutrition Foundation, 1974-1977.
- (4) Adult Basic Education Statewide Evaluation, Pa. Dept. of Education, 1975-1976.
- (5) Evaluation Design for Teacher Role Development Project, Title III Project, 1974-1976.
- (6) Addiction Prevention Project, P.S.U., Pa. Governor's Council on Drug and Alcohol Abuse, 1976-1977.

5. Consulting Experience:

- a. State Library Director Evaluation Training, 1972-1973.
- b. Ohio State Department of Education, Accountability Project, 1973
- c. Indiana State Department of Education, Accountability Project, 1973
- d. Dayton, Ohio School District, Accountability Project, 1972
- e. Council for Exceptional Children, Evaluation of Training Programs, 1975
- f. Pa. Bureau of Corrections, Evaluation of Information Systems, 1974-1975
- g. Pa. Department of Education, Evaluation of Follow-Through Projects in Lock Haven and Scranton, Pa., 1975-1976, 1976-1977
- h. Cumberland Valley School District, Pa., Evaluation of Affective Education Project, 1975-76
- i. State College, Pa., School District, Reliability of Language Arts Criterion Referenced Tests, 1976-77
- j. Pa. Department of Education, Pennsylvania School Improvement Project, NIE funded R & D Utilization Project, Linkage Case Studies, 1977-present
- k. National Education Association, NIE funded R & D Utilization Project, Linkage Case Studies, 1977-present

6. Professional Memberships:

- a. American Educational Research Association Membership Committee, Division D, 1975-76
- b. Pennsylvania Educational Research Association
- c. International Society of Educational Planners
- d. National Council on Measurement in Education
- e. Phi Delta Kappa
- f. Evaluation Network
- g. Evaluation Special Interest Group, AERA

7. Publications and/or Creative Works:

a. Monograph

The Status of Management Information Systems (MIS) in State Departments of Education: Case Studies. Alabama State Department of Education, 1973.

b. Articles

- (1) Barnette, J. "The Objective Evaluation of Student Performance." Proceedings of the North Central Section of ASEE Convention, Cleveland, Ohio, 1972.

- (2) Barnette, J. "A Model for the Evaluation of Continuing Engineering Studies Program." Continuing Engineering Studies Series, No. 8, ASEE, pp. 89-92, 1974.
- (3) Hayman, J. and Barnette, J. "The Design and Implementation of a Future Oriented Sensing System for Identifying National Educational Information Needs." Educational Planning, March 1977.
- (4) Noll, R., Willower, D. and Barnette, J. "Teacher Self-Actualization and Pupil Control Ideology." The Alberta Journal of Educational Research, Spring 1977.
- (5) Barnette, J. and Branca, M. "Learner Objectives for Comprehensive Nutrition Education." Accepted, pending revision, by: Journal of Nutrition Education, May 1978.
- (6) Barnette, J., Danielson, T. and Algozzine, R. "DELPHI, Methodology: An Empirical Investigation", Educational Research Quarterly, Spring 1978.

Accepted for Publication:

- (7) Barnette, J. "Did Mark Twain Ever Meet Sir Ronald Fisher?", CEDR Quarterly.
- (8) Barnette, J. "Proposed: An Energy-Saving Education Calendar," Phi Delta Kappan.
- (9) Barnette, J. and Thompson, J. "A Descriptive Assessment of Evaluation's Effect on Instruction," Studies in Educational Evaluation.

c. Papers Presented

- (1) (With Bargar, R.) "Model for Graduate Education." AERA Convention, New Orleans, La., 1973.
- (2) (With Hayman, J.) "Design of a Future-Oriented Sensing System for the Identification, Production, and Dissemination of National Educational Information Needs." AERA Convention, Washington, D.C., 1975.
- (3) (With Danielson, L. and Algozzine, R.) "Future Trends in Special Education: Implication for the Supervision of Special Education." AERA Convention, Washington, D.C., 1975.
- (4) (With DeMonbreun, C.) "Special Education Pupil and Personnel Assessment and Reporting System." AERA Convention, San Francisco, 1976.
- (5) (With Deck, D.) "Measuring Attitudes Toward Reading in Large Scale Assessment." AERA Convention, San Francisco, 1976.
- (6) (With Danielson, L. and Algozzine, R.) "Problems and Potential Solutions in the Use of DELPHI Methodology, Using Mailed Questionnaires, on a National Scale." AERA Convention, San Francisco, 1976.

- (7) (With Branca, M.) "Developing Learner Objectives for a Nutrition Education Curriculum." AERA Convention, San Francisco, 1976.
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- (10) "Procedures and Instruments for Nutrition Education Needs Assessment." ASCD Convention, Houston, Tx., 1977.
- (11) (With Lynch, P.) "Teacher Behavior and Pupil Attitudes: An Intervention Strategy." AERA Convention, New York, 1977.
- (12) "The Role of Evaluation in Organizational Development." AERA Convention, New York, 1977.
- (13) (With Algozzine, R. and Danielson, L.) "The Disturbing Child: A Validation Study." CEC Convention, Atlanta, 1977.
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- (15) "Reduction of Student Anxiety in Research and Statistics Courses Using the Writings of Mark Twain." AERA Convention, Toronto, Canada, 1978.

d. Chapter in Training Manual

"Evaluation" section in Developing Teacher Roles for Positive Classroom Climate, A Training Manual for Teachers. Pa. Dept. of Education, Title III Project, 1976.

e. Tests Developed (with Deck, D.)

Attitude Towards Reading - Primary Form

Attitude Towards Reading - Intermediate Form